



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix A – 2022 Field Logs

Appendix A-1. 1st Quarter Field Logs

Appendix A-2. 2nd Quarter Field Logs

Appendix A-3. 3rd Quarter Field Logs

Appendix A-4. 4th Quarter Field Logs



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix A-1. 1st Quarter Field Logs

WELL ID		TEST PARAMETERS								
MKTf-01R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/1	Initial	2:00	7.02	13.3	4.26	2769.00	2.28	0.71	-92.7
GAUGE TIME		1	2:04	7.00	13.1	4.20	2766.50	2.28	0.71	-90.1
DHC (FEET)	10.00 3.16	2	2:09	7.00	13.0	4.20	2760.00	2.27	0.70	-90.1
DTW (FEET)	18.11	3								
DTB (FEET)	14.75	4								
DTB - DTW	0.653 - 4"	5								
CAPACITY PER FOOT	0.163 - 2"	6								
PURGING DATA										
3 WELL VOLUMES	7.25	WEATHER CONDITIONS: Sunny 59°F 16 mph SW winds								
PURGE DATE	3/16	WATER APPEARANCE / ODOR: Brown / H/C odor								
END OF PURGE TIME	2:10	COMMENTS:								
PURGE AMOUNT	7.50									
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3/17	WEATHER CONDITIONS: Cloudy 34°F								
DTW (FEET)	17.76	WATER APPEARANCE / ODOR: Brown / H/C odor								
SAMPLE TIME	8:40	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-01R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-02R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/11	Initial	3:23	7.28	13.5	7.09	4608.50	3.92	1.52	25.2
GAUGE TIME		1	3:26	7.25	13.2	7.05	4618.50	3.95	1.50	25.0
DHC (FEET)	—	2	3:30	7.25	13.3	7.05	4620.00	3.94	1.50	25.1
DTW (FEET)	10.20	3								
DTB (FEET)	21.49	4								
DTB - DTW	11.29	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	5.5	WEATHER CONDITIONS: Sunny 61°F 10mph W
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	3:30	COMMENTS:
PURGE AMOUNT	5.5	
DTW (FEET)	17.85	

SAMPLING DATA

SAMPLE DATE	3/16	WEATHER CONDITIONS: Sunny 46°F 5 mph SW
DTW (FEET)	11.23	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	10:46	COMMENTS:

SAMPLE LOG

SAMPLE ID MKTf-02R	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

WELL ID		TEST PARAMETERS								
MKTF-03		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	7.70	2								
DTW (FEET)	8.90	3								
DTB (FEET)	18.64	4								
DTB - DTW	9.74	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-03		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-04R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	01:10	7.08	14.5	2.08	1352	1.07	1.76	-61.1
GAUGE TIME		1	01:14	7.08	13.8	2.08	1352	1.07	1.74	-61.1
DHC (FEET)	—	2	01:17	7.10	13.8	2.07	134550	1.07	1.70	-62.2
DTW (FEET)	9.71	3								
DTB (FEET)	14.22	4								
DTB - DTW	9.51	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4.5	WEATHER CONDITIONS: Sunny 48°F 11 mph winds N								
PURGE DATE	3/14	WATER APPEARANCE/ ODOR: Brown / HC odor								
END OF PURGE TIME	1:20	COMMENTS:								
PURGE AMOUNT	4.5									
DTW (FEET)	14.71									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 56°F								
DTW (FEET)	10.20	WATER APPEARANCE / ODOR: Brown / HC odor								
SAMPLE TIME	10:20	COMMENTS:								
SAMPLE LOG										
SAMPLE ID MKTf-04R		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-05		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	14.44	2								
DTW (FEET)	15.08	3								
DTB (FEET)	17.35	4								
DTB - DTW	2.67	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID MKTF-05	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

WELL ID		TEST PARAMETERS								
MKTF-06		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	18.00	2								
DTW (FEET)	18.95	3								
DTB (FEET)	23.85	4								
DTB - DTW	4.9	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-06		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-07		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	13.92	2								
DTW (FEET)	14.00	3								
DTB (FEET)	17.85	4								
DTB - DTW	3.85	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: <i>HAS Product</i>
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID MKTf-07	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	Na ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-08		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	15.00	2								
DTW (FEET)	15.33	3								
DTB (FEET)	22	4								
DTB - DTW	4.76	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-08		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-09		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	15.11	2								
DTW (FEET)	15.15	3								
DTB (FEET)	22.76	4								
DTB - DTW	7.55	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-09	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
MKTf-10		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3-1	Initial	11:50	6.87	11.4	3.25	2112.00	1.71	1.27	-36.3
GAUGE TIME		1	12:02	6.93	11.9	3.27	2170.50	1.91	1.30	-39.9
DHC (FEET)	—	2								
DTW (FEET)	8.30	3								
DTB (FEET)	16.61	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	16.50	WEATHER CONDITIONS: Sunny 50°F 10 mph NW winds								
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Purged Dry Clear / No odor								
END OF PURGE TIME	2:25	COMMENTS:								
PURGE AMOUNT	10.00									
DTW (FEET)	Dry									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 52°F								
DTW (FEET)	8.77	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	11:56	COMMENTS: FB 3-15-22 collected								
SAMPLE LOG										
SAMPLE ID MKTf-10		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-11		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	11:30	7.05	12.7	4.90	323700	2.69	1.21	-34.4
GAUGE TIME		1	11:40	7.00	12.0	5.01	324650	2.72	1.19	-33.6
DHC (FEET)	—	2								
DTW (FEET)	7.84	3								
DTB (FEET)	19.34	4								
DTB - DTW	10.50	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
2250		PURGING DATA								
3 WELL VOLUMES	600	WEATHER CONDITIONS: Sunny 61.8°F 11 mph W winds								
PURGE DATE	3/14	WATER APPEARANCE / ODOR: Sunny, del Grayish / HC odor								
END OF PURGE TIME	13:40	COMMENTS: Purged DRY								
PURGE AMOUNT	19.00									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 50°F								
DTW (FEET)	8.32	WATER APPEARANCE / ODOR: Grayish / HC odor								
SAMPLE TIME	11:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID MKTf-11		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-12		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	311	Initial								
GAUGE TIME		1								
DHC (FEET)	19.12	2								
DTW (FEET)	19.19	3								
DTB (FEET)	25.88	4								
DTB - DTW	6.69	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: <i>HAS Product</i>								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-12		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-13		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	13.44	2								
DTW (FEET)	15.78	3								
DTB (FEET)	21.75	4								
DTB - DTW	6.03	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-13		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-14		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	7.15	2								
DTW (FEET)	7.36	3								
DTB (FEET)	17.55	4								
DTB - DTW	10.19	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA	
3 WELL VOLUMES	WEATHER CONDITIONS:
PURGE DATE	WATER APPEARANCE / ODOR:
END OF PURGE TIME	COMMENTS:
PURGE AMOUNT	
DTW (FEET)	

SAMPLING DATA	
SAMPLE DATE	WEATHER CONDITIONS:
DTW (FEET)	WATER APPEARANCE / ODOR:
SAMPLE TIME	COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-14	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-15		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	13.30	2								
DTW (FEET)	14.00	3								
DTB (FEET)	19.55	4								
DTB - DTW	5.55	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Picked								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-15		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-16		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	10:00	6.80	9.2	367.5	0.792	0.40	0.15	348.5
GAUGE TIME		1	11:20	6.83	9.0	373.2	0.803	0.51	0.97	342.3
DHC (FEET)	—	2								
DTW (FEET)	8.42	3								
DTB (FEET)	10.92	4								
DTB - DTW	2.50	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	1.25	WEATHER CONDITIONS: Sunny 48°F 16 mph N winds								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Clean / No odor								
END OF PURGE TIME	3:15	COMMENTS:								
PURGE AMOUNT	.56									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 37°F 14 mph NW								
DTW (FEET)	9.50	WATER APPEARANCE / ODOR: Clean / No odor								
SAMPLE TIME	11:00	COMMENTS: FD-3-23-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-16		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

WELL ID		TEST PARAMETERS								
MKTF-17R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	11:15	7.21	13.3	1.89	1788.56	0.96	1.10	-111.5
GAUGE TIME		1	11:18	7.26	13.5	1.87	1222.50	0.96	1.17	-107.5
DHC (FEET)	—	2	11:24	7.28	12.9	1.90	1225.50	0.97	1.09	-106.5
DTW (FEET)	12.35	3								
DTB (FEET)	20.50	4								
DTB - DTW	8.15	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4	WEATHER CONDITIONS: Sunny 40°F								
PURGE DATE	3/14	WATER APPEARANCE / ODOR: Brown / HC odor / Sheen in bucket								
END OF PURGE TIME	11:45	COMMENTS:								
PURGE AMOUNT	4									
DTW (FEET)	17.84									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 47°F								
DTW (FEET)	13.50	WATER APPEARANCE / ODOR: Brown / HC odor								
SAMPLE TIME	10:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-17R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
MKTf-18R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	11:44	7.12	13.6	2.10	1365	1.08	0.78	-71.6
GAUGE TIME		1	11:48	7.11	13.4	2.08	1359.50	1.08	0.75	-69.9
DHC (FEET)	—	2	11:53	7.09	13.4	2.08	1352	1.07	0.69	-72.3
DTW (FEET)	10.17	3								
DTB (FEET)	25.50	4								
DTB - DTW	15.33	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.5	WEATHER CONDITIONS: Sunny / 41°F 12 mph NW								
PURGE DATE	3/14	WATER APPEARANCE / ODOR: Brown / HC odor / Sheen in bucket								
END OF PURGE TIME	11:55	COMMENTS:								
PURGE AMOUNT	7.5									
DTW (FEET)	17.35									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 47°F								
DTW (FEET)	10.75	WATER APPEARANCE / ODOR: Brown / HC odor								
SAMPLE TIME	10:26	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-18R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

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WELL ID		TEST PARAMETERS								
MKTF-19		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	13.00	2								
DTW (FEET)	14.10	3								
DTB (FEET)	19.46	4								
DTB - DTW	5.36	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-19		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

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MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-20		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	—	2								
DTW (FEET)	9.42	3								
DTB (FEET)	9.60	4								
DTB - DTW	.18	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: Not Enough Fluid to Sample								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS: Not Enough Fluid to Sample								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-20		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-21		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	—	2								
DTW (FEET)	8.87	3								
DTB (FEET)	8.95	4								
DTB - DTW	.08	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: Not Enough to Purge								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS: Not Enough Fluid to Sample								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-21		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-22		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	25.41	2								
DTW (FEET)	27.49	3								
DTB (FEET)	35.68	4								
DTB - DTW	8.21	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: <i>URS Product</i>								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-22		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-23		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	14.27	2								
DTW (FEET)	14.32	3								
DTB (FEET)	20.40	4								
DTB - DTW	6.08	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HRS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTF-23	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
MKTf-24		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	10:14	6.98	15.9	4.58	2977	2.46	1.61	33.3
GAUGE TIME		1	10:25	6.96	16.6	4.60	2981.50	2.44	1.00	32.4
DHC (FEET)	—	2								
DTW (FEET)	23.60	3								
DTB (FEET)	31.46	4								
DTB - DTW	7.8	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4	WEATHER CONDITIONS: Sunny 57°F								
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Brown / HC odor								
END OF PURGE TIME	3:15	COMMENTS: Purged Dry								
PURGE AMOUNT	3.5									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/16	WEATHER CONDITIONS: Sunny 45°F Smph winds SW								
DTW (FEET)	22.39	WATER APPEARANCE / ODOR: Brown / HC odor								
SAMPLE TIME	10:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-24		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
MKTF-25		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	9:49	7.04	16.7	4.23	2749.50	2.26	1.44	206.2
GAUGE TIME		1	10:05	7.00	16.6	4.31	2806.50	2.30	1.20	147.2
DHC (FEET)	—	2								
DTW (FEET)	13.70	3								
DTB (FEET)	20.08	4								
DTB - DTW	6.38	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3	WEATHER CONDITIONS: Sunny 58°F								
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Brown / No odor								
END OF PURGE TIME	3:00	COMMENTS: Purged Dry								
PURGE AMOUNT	1.75									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/16	WEATHER CONDITIONS: Cloudy 45°F 4 mph S wind								
DTW (FEET)	12.50	WATER APPEARANCE / ODOR: Brown / No odor								
SAMPLE TIME	9:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID MKTF-25		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

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MARATHON GALLUP REFINERY

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WELL ID		TEST PARAMETERS								
MKTf-26		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2/22	Initial								
GAUGE TIME		1								
DHC (FEET)	8.85	2								
DTW (FEET)	8.98	3								
DTB (FEET)	16.96	4								
DTB - DTW	7.92	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-26		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

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WELL ID		TEST PARAMETERS								
MKTf-27		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/11	Initial	2:25	6.77	10.6	16.90	10985.00	9.95	0.67	255.2
GAUGE TIME		1	2:29	6.80	9.8	16.84	10952.50	9.91	0.58	223.7
DHC (FEET)	—	2	2:33	6.81	9.9	16.64	10969.50	9.78	0.65	229.0
DTW (FEET)	6.58	3								
DTB (FEET)	14.75	4								
DTB - DTW	8.17	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	4	WEATHER CONDITIONS:
PURGE DATE	3/16	WATER APPEARANCE / ODOR:
END OF PURGE TIME	2:35	COMMENTS:
PURGE AMOUNT	4	
DTW (FEET)	12.61	

SAMPLING DATA

SAMPLE DATE	3/17	WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME	9:05	COMMENTS:

SAMPLE LOG

SAMPLE ID MKTf-27	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

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WELL ID		TEST PARAMETERS								
MKTF-28		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	3/1	Initial	2:35	7.30	12.2	3.97	2574	2.11	0.63	285.8
GAUGE TIME		1	2:39	7.26	11.8	3.97	2880.58	2.11	0.60	281.58
DHC (FEET)	—	2	2:43	7.36	11.6	3.97	2580.58	2.11	0.57	277.5
DTW (FEET)	7.53	3								
DTB (FEET)	16.17	4								
DTB - DTW	8.64	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4	WEATHER CONDITIONS: Sunny 59°F 18 mph SW winds								
PURGE DATE	3/16	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:45	COMMENTS:								
PURGE AMOUNT	4									
DTW (FEET)	12.50									
SAMPLING DATA										
SAMPLE DATE	3/17	WEATHER CONDITIONS: Sunny 34°F 13 NW winds								
DTW (FEET)	15.38	WATER APPEARANCE / ODOR: Clear No odor								
SAMPLE TIME	9:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-28		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-29		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	3:20	6.88	11.9	6.63	4309.50	3.65	0.65	287.1
GAUGE TIME		1	3:24	6.87	10.0	6.62	4703	3.64	0.61	276.0
DHC (FEET)	—	2	3:28	6.90	10.9	6.58	4277	3.62	0.47	280.0
DTW (FEET)	6.42	3								
DTB (FEET)	22.84	4								
DTB - DTW	16.42	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	8	WEATHER CONDITIONS: Sunny 61°F 16 mph SW								
PURGE DATE	3/16	WATER APPEARANCE / ODOR: Clear no odor								
END OF PURGE TIME	3:30	COMMENTS:								
PURGE AMOUNT	8									
DTW (FEET)	6.71									
SAMPLING DATA										
SAMPLE DATE	3/17	WEATHER CONDITIONS: Sunny 36°F 16 mph NW								
DTW (FEET)	6.16	WATER APPEARANCE / ODOR: Clear no odor								
SAMPLE TIME	10:06	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-29		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-29		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1/22	Initial	10:15	7.17	11.0	233	1460	1.15	1.70	88.3
GAUGE TIME		1	10:25	7.19	11.3	224	1460.50	1.10	1.70	89.5
DHC (FEET)	NA	2								
DTW (FEET)	17.45	3								
DTB (FEET)	51.46	4								
DTB - DTW	34.01	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	66.50	WEATHER CONDITIONS:	Cloudy 38°F Snow 12 mph NE
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR:	Clear / NO odor
END OF PURGE TIME	2:15	COMMENTS:	Purged Dry
PURGE VOLUME	34.50		
DTW (FEET)	Dry		

SAMPLING DATA

SAMPLE DATE	3-8-22	WEATHER CONDITIONS:	Sunny 36°F
DTW (FEET)	22.32	WATER APPEARANCE / ODOR:	Clear / NO odor
SAMPLE TIME	10:15	COMMENTS:	

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
OW-29	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED

WATER LEVEL PROBE

WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-30		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	10:14	7.34	8.5	4.26	270.66	2.77	6.84	268.0
GAUGE TIME		1	10:29	7.34	9.1	4.20	2755.80	2.30	0.88	268.72
DHC (FEET)	—	2								
DTW (FEET)	17.17	3								
DTB (FEET)	22.95	4								
DTB - DTW	5.82	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES	3	WEATHER CONDITIONS: Sunny 61°F 19 mph SW wind
PURGE DATE	3/1/6	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	3:50	COMMENTS: Purged Dry
PURGE AMOUNT	1.5	
DTW (FEET)	DRY	

SAMPLING DATA		
SAMPLE DATE	3/17	WEATHER CONDITIONS: Sunny 76°F 16 mph NW wind
DTW (FEET)	17.03	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	10:15	COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-30	40 ML VOA	6	HCL
	40 ML VOA	2	Na ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-31		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	2:35	7.22	10.4	2.53	1644.50	1.31	2.90	175.1
GAUGE TIME		1	2:38	7.23	9.2	2.49	1641.50	1.30	2.92	174.5
DHC (FEET)	—	2	2:44	7.24	9.8	2.49	1640.50	1.29	3.04	170.5
DTW (FEET)	9.30	3								
DTB (FEET)	19.35	4								
DTB - DTW	10.05	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5	WEATHER CONDITIONS: Sunny 58°F								
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:45	COMMENTS:								
PURGE AMOUNT	5									
DTW (FEET)	11.48									
SAMPLING DATA										
SAMPLE DATE	3/16	WEATHER CONDITIONS: Sunny 44°F 3 mph 5 winds								
DTW (FEET)	9.58	WATER APPEARANCE / ODOR: Clear no odor								
SAMPLE TIME	9:10	COMMENTS: Dup collected on Dup 3-16-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-31		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-32		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	3:05	7.77	12.6	2.43	1579.50	1.76	1.00	227.6
GAUGE TIME		1	3:09	7.76	12.5	2.44	1580.02	1.30	1.02	227.8
DHC (FEET)	NA	2	3:13	7.76	12.5	2.44	1581.50	1.28	1.02	227.8
DTW (FEET)	14.42	3								
DTB (FEET)	27.78	4								
DTB - DTW	13.36	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	6.5	WEATHER CONDITIONS: Sunny 41°F								
PURGE DATE	3-8-22	WATER APPEARANCE / ODOR: Clear No odor								
END OF PURGE TIME	9:15	COMMENTS:								
PURGE AMOUNT	6.5									
DTW (FEET)	24.90									
SAMPLING DATA										
SAMPLE DATE	3-9-22	WEATHER CONDITIONS: Sunny 30°F 8 mph winds SE								
DTW (FEET)	16.50	WATER APPEARANCE / ODOR: Clear No odor								
SAMPLE TIME	10:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-32		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-33		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	311	Initial								
GAUGE TIME		1								
DHC (FEET)	23.25	2								
DTW (FEET)	23.29	3								
DTB (FEET)	33.16	4								
DTB - DTW	10.01	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-33		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-34		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	3:30	7.17	13.3	1.73	1124.50	0.88	1.10	-63.9
GAUGE TIME		1	3:34	7.19	13.2	1.73	1126.50	0.88	1.09	-63.8
DHC (FEET)	NA	2	3:38	7.19	13.2	1.75	1126.00	0.88	1.09	-64.0
DTW (FEET)	18.69	3								
DTB (FEET)	27.72	4								
DTB - DTW	9.03	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES	4.5	WEATHER CONDITIONS: Sunny 41°F
PURGE DATE	3-8-22	WATER APPEARANCE / ODOR: Cloudy / No odor
END OF PURGE TIME	3:45	COMMENTS:
PURGE AMOUNT	4.5	
DTW (FEET)	26.82	

SAMPLING DATA		
SAMPLE DATE	3-9-22	WEATHER CONDITIONS: Sunny 30°F 9mph winds SB
DTW (FEET)	20.60	WATER APPEARANCE / ODOR: Clear No odor
SAMPLE TIME	10:20	COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-34	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-35		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	9:05	6.94	10.6	2.34	154.00	1.21	0.59	44.9
GAUGE TIME		1	9:15	7.00	10.9	2.36	153.40	1.22	0.62	-63.3
DHC (FEET)	NA	2								
DTW (FEET)	10.10	3								
DTB (FEET)	16.48	4								
DTB - DTW	6.38	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.00	WEATHER CONDITIONS: Cloudy 47°F 15 mph winds SE								
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: Brown / HC odor								
END OF PURGE TIME	3:20	COMMENTS:								
PURGE AMOUNT	2.00									
DTW (FEET)	DTW									
SAMPLING DATA										
SAMPLE DATE	3-10-22	WEATHER CONDITIONS: Cloudy 31°F								
DTW (FEET)	10.32	WATER APPEARANCE / ODOR: Gray / HC odor								
SAMPLE TIME	9:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-35		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-36		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	8.37	2								
DTW (FEET)	8.55	3								
DTB (FEET)	15.58	4								
DTB - DTW	7.03	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT		HVS Product								
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-36		40 ML VOA	6		HCL					
		40 ML VOA	2		Na ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-37		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	311	Initial								
GAUGE TIME		1								
DHC (FEET)	10.32	2								
DTW (FEET)	10.39	3								
DTB (FEET)	24.69	4								
DTB - DTW	14.30	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-37		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-38		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	10:45	7.48	13.3	1.96	1235.00	6.97	2.37	55.9
GAUGE TIME		1	11:06	7.49	13.4	1.88	1237.50	1.01	2.40	54.7
DHC (FEET)	—	2								
DTW (FEET)	10.66	3								
DTB (FEET)	20.28	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	4.75	WEATHER CONDITIONS:	Sunny 46°F 11 mph N
PURGE DATE	3/14	WATER APPEARANCE / ODOR:	Gray / Rotten Egg Smell / White bugs in bucket
END OF PURGE TIME	12:55	COMMENTS:	Purged Dry
PURGE AMOUNT	1.56		
DTW (FEET)	DRY		

SAMPLING DATA

SAMPLE DATE	3/15	WEATHER CONDITIONS:	Sunny 48°F
DTW (FEET)	10.71	WATER APPEARANCE / ODOR:	Gray / Rotten Egg Smell / White bugs
SAMPLE TIME	10:45	COMMENTS:	

SAMPLE LOG

SAMPLE ID MKTF-38	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-39		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	9.68	2								
DTW (FEET)	10.08	3								
DTB (FEET)	15.20	4								
DTB - DTW	5.48	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT		HAS Product								
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-39		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-40		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/11	Initial	2:18	6.99	14.3	12.16	7904	6.99	3.20	127.1
GAUGE TIME	-	1	2:18	7.03	13.3	12.06	7839	6.93	3.14	124.2
DHC (FEET)	-	2	2:24	7.04	13.3	12.02	7813	6.90	3.14	126.2
DTW (FEET)	14.30									
DTB (FEET)	20.14	4								
DTB - DTW	9.36	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES	4.5	WEATHER CONDITIONS: Sunny 58°F 2 mph winds W
PURGE DATE	3/15	WATER APPEARANCE / ODOR: Clear no odor
END OF PURGE TIME	2:25	COMMENTS:
PURGE AMOUNT	4.5	
DTW (FEET)	71.50	

SAMPLING DATA		
SAMPLE DATE	3/16	WEATHER CONDITIONS: Sunny 37°F 3 mph W
DTW (FEET)		WATER APPEARANCE / ODOR: Clear no odor
SAMPLE TIME	8:30	COMMENTS: 3/16/2022 8:30 AM

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-40	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	
OIL / WATER INTERFACE PROBE	
WATER QUALITY/PARAMETER PROBE	

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-41		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	2:37	8.06	14	3.03	1969.50	1.59	1.09	199.1
GAUGE TIME		1	2:41	8.12	13.4	3.55	1980.00	1.57	0.77	191.3
DHC (FEET)	NA	2	2:45	8.13	13.1	3.00	1950.00	1.57	0.98	196.5
DTW (FEET)	21.43	3								
DTB (FEET)	39.76	4								
DTB - DTW	18.33	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	9	WEATHER CONDITIONS: Sunny 42°F
PURGE DATE	3-8-22	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	2:45	COMMENTS:
PURGE AMOUNT	9	
DTW (FEET)	31.94	

SAMPLING DATA

SAMPLE DATE	3-9-22	WEATHER CONDITIONS: Sunny 30°F 8 mph winds SE
DTW (FEET)	23.23	WATER APPEARANCE / ODOR: Clear No odor
SAMPLE TIME	9:35	COMMENTS: TSS

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTF-41	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-42		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	3/1	Initial	1:55	7.93	14.8	3.36	2184.00	1.78	0.85	40.8
GAUGE TIME		1	1:59	7.94	13.2	3.40	2200.00	1.77	1.38	40.1
DHC (FEET)	NA	2	2:03	7.98	13.3	3.47	2220.00	1.80	1.58	40.9
DTW (FEET)	17.20	3								
DTB (FEET)	33.17	4								
DTB - DTW	15.97	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	8	WEATHER CONDITIONS: Sunny 38°C NW winds 9mph								
PURGE DATE	3-8-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	7:05	COMMENTS:								
PURGE AMOUNT	8									
DTW (FEET)	28.02									
SAMPLING DATA										
SAMPLE DATE	3-9-22	WEATHER CONDITIONS: Sunny 30°C								
DTW (FEET)	19.01	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:00	COMMENTS: Dup Collected Dup 3-9-22								
SAMPLE LOG										
SAMPLE ID MKTF-42		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-43		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial	11:23	6.64	8.7	28.22	15345.0	17.35	2.00	147.3
GAUGE TIME		1	11:27	6.67	8.9	28.22	15356.0	17.34	1.94	148.1
DHC (FEET)	NA	2	11:31	6.69	8.5	28.23	15355.50	17.34	2.02	145.8
DTW (FEET)	9.04	3								
DTB (FEET)	16.93	4								
DTB - DTW	7.89	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4.00	WEATHER CONDITIONS: Cloudy, 36°F								
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	11:35	COMMENTS:								
PURGE AMOUNT	4.00									
DTW (FEET)	13.19									
SAMPLING DATA										
SAMPLE DATE	3-8-22	WEATHER CONDITIONS: Sunny 30°F								
DTW (FEET)	15.44	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:45	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-43		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-44		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	3:09	8.21	14.6	1.92	1189.01	0.93	5.58	160.9
GAUGE TIME		1	3:13	8.11	14.6	1.82	1176.50	0.91	5.90	157.7
DHC (FEET)	—	2	3:17	9.10	14.0	1.80	1166.00	0.91	6.01	152.5
DTW (FEET)	41.40	3								
DTB (FEET)	51.25	4								
DTB - DTW	9.85	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5	WEATHER CONDITIONS: Sunny 61°F 70 mph NW wind								
PURGE DATE	3/23	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	3:26	COMMENTS:								
PURGE AMOUNT	5									
DTW (FEET)	50.93									
SAMPLING DATA										
SAMPLE DATE	3/24	WEATHER CONDITIONS: Sunny 50°F								
DTW (FEET)	46.83	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:54	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-44		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-45		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	14.28	2								
DTW (FEET)	14.33	3								
DTB (FEET)	30.50	4								
DTB - DTW	6.17	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-45		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-46		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	15:35	6.99	12.8	2.02	1313	1.04	0.98	159.4
GAUGE TIME		1	15:38	7.02	12.8	2.04	1326	1.05	1.01	159.2
DHC (FEET)	NA	2	15:41	7.02	12.8	2.06	1332	1.05	1.01	161.1
DTW (FEET)	12.80	3								
DTB (FEET)	21.30	4								
DTB - DTW	8.5	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	4.00	WEATHER CONDITIONS: Cloudy 47°F 15 mph winds SE
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	15:41	COMMENTS:
PURGE AMOUNT	4	
DTW (FEET)	18.97	

SAMPLING DATA

SAMPLE DATE	3-10-22	WEATHER CONDITIONS: Cloudy 31°F 10 mph SE winds
DTW (FEET)	12.55	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	8:00	COMMENTS: DUP collected at 9417 3-10-22

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTF-46	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-47		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	11.00	2								
DTW (FEET)	11.05	3								
DTB (FEET)	14.32	4								
DTB - DTW	3.27	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-47		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-48		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	10.38	2								
DTW (FEET)	11.83	3								
DTB (FEET)	21.00	4								
DTB - DTW	21.00 9.17									
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-48		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-49		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	20.46	2								
DTW (FEET)	20.64	3								
DTB (FEET)	25.00	4								
DTB - DTW	4.36	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: <i>AVS Product</i>								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-49		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-50		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	15.41	2								
DTW (FEET)	15.71	3								
DTB (FEET)	21.71	4								
DTB - DTW	6.00	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE							
MKTF-50	40 ML VOA	6	HCL							
	40 ML VOA	2	NA ₂ S ₂ O ₃							
	1 LITER AMBER	2	NEAT							
	500 ML AMBER	1	NEAT							
	250 ML PLASTIC	1	HNO ₃							
	125 ML PLASTIC FILTERED	1	HNO ₃							
	500 ML PLASTIC	1	NaOH							
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY/PARAMETER PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OAPIS-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	9:34	7.22	9.6	5.32	3488	288	0.17	171.8
GAUGE TIME		1	9:45	7.28	12.0	5.43	3528.50	295	0.14	149.9
DHC (FEET)	—	2								
DTW (FEET)	12.19	3								
DTB (FEET)	28.00	4								
DTB - DTW	15.81	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	6	WEATHER CONDITIONS: Snow - Cloudy 35°F 1/4 inch NW wind								
PURGE DATE	3/21	WATER APPEARANCE / ODOR: Dark Yellow / HC odor								
END OF PURGE TIME	10:50	COMMENTS: Purged DRY								
PURGE AMOUNT	6									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 34°F 16 mph NW wind								
DTW (FEET)	20.91	WATER APPEARANCE / ODOR: Dark Yellow / HC odor								
SAMPLE TIME	9:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID OAPIS-1		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
NAPIS-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	7.31	2								
DTW (FEET)	7.33	3								
DTB (FEET)	13.95	4								
DTB - DTW	6.62	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE						
NAPIS-1		40 ML VOA	6	HCL						
		40 ML VOA	2	NA ₂ S ₂ O ₃						
		1 LITER AMBER	2	NEAT						
		500 ML AMBER	1	NEAT						
		250 ML PLASTIC	1	HNO ₃						
		125 ML PLASTIC FILTERED	1	HNO ₃						
		500 ML PLASTIC	1	NaOH						
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
NAPIS-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	9:58	7.17	10.7	1.97	1290.50	1.01	0.14	98.2
GAUGE TIME		1	10:25	7.19	10.7	2.04	1326.00	1.05	0.13	77.2
DHC (FEET)	—	2								
DTW (FEET)	8.40	3								
DTB (FEET)	14.40	4								
DTB - DTW	6.00	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3	WEATHER CONDITIONS: Snow/cloudy 35°F 14 mph NW winds								
PURGE DATE	3/21	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	11:05	COMMENTS: Purged Dry								
PURGE AMOUNT	2									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 36°F 19 mph N winds								
DTW (FEET)	10.13	WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	10:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID NAPIS-2		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
NAPIS-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	11:25	7.19	13.5	2.41	1566.50	1.25	0.21	-79.4
GAUGE TIME		1	11:30	6.72	13.2	2.39	1570.50	1.30	0.19	-75.2
DHC (FEET)	—	2	11:34	6.92	13.2	2.40	1568.0	1.26	0.19	-75.2
DTW (FEET)	8.19	3								
DTB (FEET)	24.30	4								
DTB - DTW	16.12	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	8	WEATHER CONDITIONS: Snow/Cloudy 36°F 15 mph NW								
PURGE DATE	3/21	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	11:35	COMMENTS:								
PURGE AMOUNT	8									
DTW (FEET)	22.31									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 36°F 12 mph winds N								
DTW (FEET)	10.02	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
NAPIS-3		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
KA-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	10:56	7.42	11.4	233	1574.50	1.20	0.13	199.3
GAUGE TIME		1	10:15	7.38	13.3	242	1571	1.25	0.13	172.9
DHC (FEET)	—	2								
DTW (FEET)	9.53	3								
DTB (FEET)	31.39	4								
DTB - DTW	21.86	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	10.50	WEATHER CONDITIONS: Cloudy Snow 37°F 17 mph NW wind								
PURGE DATE	3/21	WATER APPEARANCE / ODOR: Clear No odor								
END OF PURGE TIME	12:00	COMMENTS: Purged Dry								
PURGE AMOUNT	3.75									
DTW (FEET)	DTW									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 36°F 20 mph NW wind								
DTW (FEET)	11.33	WATER APPEARANCE / ODOR: Clear No odor								
SAMPLE TIME	11:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID KA-3		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
STP-1-SW		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)		4								
DTB - DTW	DRY	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT		DRY								
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
STP-1-SW		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
STP-1-NW		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	2:30	7.71	15.2	7.18	4677.50	3.98	3.28	155.2
GAUGE TIME		1	2:38	7.72	14.2	7.23	4699.50	4.01	3.72	181.5
DHC (FEET)	—	2	2:43	7.72	13.7	7.30	4732.50	3.98	3.72	177.5
DTW (FEET)	21.55	3								
DTB (FEET)	47.70	4								
DTB - DTW	26.15	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	13	WEATHER CONDITIONS: Sunny 48°F 19 mph NW								
PURGE DATE	3/23	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:45	COMMENTS:								
PURGE AMOUNT	13.00									
DTW (FEET)	39.43									
SAMPLING DATA										
SAMPLE DATE	3/24	WEATHER CONDITIONS: Sunny 43°F								
DTW (FEET)	35.94	WATER APPEARANCE / ODOR:								
SAMPLE TIME	9:55	COMMENTS:								
SAMPLE LOG										
SAMPLE ID STP-1-NW		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

OUTFALL ID		TEST PARAMETERS								
STP-1 TO EP-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial	10:58	8.31	2.3	3.50	1410	1.73	3.28	201.5
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3/18	WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME	11:00	COMMENTS:								
SAMPLING LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE						
STP-1 TO EP-2										
		40 ML VOA	6	HCL						
		40 ML VOA	2	NA ₂ S ₂ O ₃						
		1 LITER AMBER	2	NEAT						
		500 ML AMBER	1	NEAT						
		250 ML PLASTIC	1	HNO ₃						
		125 ML PLASTIC FILTERED	1	HNO ₃						
		500 ML PLASTIC	1	NaOH						
		1 LITER PLASTIC	1	NEAT						
		500 ML PLASTIC	1	NA ₂ SO ₃						
		100 ML PLASTIC	1	NEAT						
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
EAST LDU		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial								
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4" 0.163 - 2"	6								
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3/1/8	WEATHER CONDITIONS:								
DTW (FEET)	1.70	WATER APPEARANCE / ODOR:								
SAMPLE TIME	9:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID EAST LDU		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
WEST LDU		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial								
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3/18	WEATHER CONDITIONS: Sunny 96°F								
DTW (FEET)		WATER APPEARANCE / ODOR: Yellow / HC odor								
SAMPLE TIME	10:00	COMMENTS: DUP collected DUP-3-18-22								
SAMPLE LOG										
SAMPLE ID WEST LDU		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
BW-5B		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	NA	2								
DTW (FEET)	10.10	3								
DTB (FEET)	54.35	4								
DTB - DTW	44.25	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	21.63	WEATHER CONDITIONS: Cloudy 36°F Snow Winds from NE								
PURGE DATE	3-7-21	WATER APPEARANCE / ODOR: Clear No odor								
END OF PURGE TIME	12:45	COMMENTS: Purged Dry								
PURGE AMOUNT	9.00									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	3-8-22	WEATHER CONDITIONS: Sunny 35°F								
DTW (FEET)	42.32	WATER APPEARANCE / ODOR: Clear No odor								
SAMPLE TIME	9:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID BW-5B		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
BW-5C		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE		Initial	12:20	7.47	10.8	5.57	3677.00	3.03	3.24	-19.1
GAUGE TIME		1	12:25	7.49	10.8	5.65	3671.00	3.03	3.21	-23.7
DHC (FEET)	NA	2	12:30	7.49	10.8	5.64	3680.50	3.05	3.22	-21.8
DTW (FEET)	4.00	3								
DTB (FEET)	69.56	4								
DTB - DTW	65.56	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	32.00	WEATHER CONDITIONS:	Cloudy 36°F Snow Winds 8 mph NE
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR:	Clear Brown / Smoky / No odor
END OF PURGE TIME	12:35	COMMENTS:	
PURGE AMOUNT	32.00		
DTW (FEET)	5.48		

SAMPLING DATA

SAMPLE DATE	3-8-22	WEATHER CONDITIONS:	Clear 21°F
DTW (FEET)	3.67	WATER APPEARANCE / ODOR:	
SAMPLE TIME	8:20	COMMENTS:	DUP Collected : DUP-3-8-22

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
BW-5C	40 ML VOA	6	HCL
	40 ML VOA	2	Na ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
PW-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial	10:45	7.44	77.9	1.56	1014.00	0.79	4.12	111.3
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3-9-22	WEATHER CONDITIONS:								
DTW (FEET)		Sunny 30°F 8 mph Winds SE								
		WATER APPEARANCE / ODOR:								
		Clear / No odor								
SAMPLE TIME	10:40	COMMENTS:								
		FB collected FB 3-9-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
PW-3		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
PW-4		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial	18:46	7.17	10.3	6634	412.10	0.31	1.57	37.4
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	3-9-22	WEATHER CONDITIONS:								
DTW (FEET)		Sunny 30°F								
		WATER APPEARANCE / ODOR:								
		Clear No odor								
SAMPLE TIME	8:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
PW-4		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
GWM-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)	19.15	4								
DTB - DTW	DRY	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
GWM-3		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
GWM-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	311	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)	18.08	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: WATER DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE						
GWM-2		40 ML VOA	6	HCL						
		40 ML VOA	2	NA ₂ S ₂ O ₃						
		1 LITER AMBER	2	NEAT						
		500 ML AMBER	1	NEAT						
		250 ML PLASTIC	1	HNO ₃						
		125 ML PLASTIC FILTERED	1	HNO ₃						
		500 ML PLASTIC	1	NaOH						
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
GWM-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial								
GAUGE TIME		1								
DHC (FEET)	20.84	2								
DTW (FEET)	22.10	3								
DTB (FEET)	24.40	4								
DTB - DTW	4.30	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: KAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
GWM-1		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
NAPI INLET		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE		Initial								
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: Can Not Get								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID NAPI INLET		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OIL SUMP LDU		Volumes	TIME	pH	Temperature Degrees C	Conductivity (uS/m)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial								
GAUGE TIME		1								
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OIL SUMP LDU		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	30.01	2								
DTW (FEET)	32.03	3								
DTB (FEET)	43.45	4								
DTB - DTW	11.42	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-1	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-2R		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	22.44	2								
DTW (FEET)	24.84	3								
DTB (FEET)	31.50	4								
DTB - DTW	6.66	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-2R		40 ML VOA	6	HCL
↓	↓	40 ML VOA	2	NA ₂ S ₂ O ₃
		1 LITER AMBER	2	NEAT
		500 ML AMBER	1	NEAT
		250 ML PLASTIC	1	HNO ₃
		125 ML PLASTIC FILTERED	1	HNO ₃
	↓	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-5		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	30.30	2								
DTW (FEET)	32.65	3								
DTB (FEET)	39.50	4								
DTB - DTW	6.85	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-5	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-6		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	30.38	2								
DTW (FEET)	33.11	3								
DTB (FEET)	40.85	4								
DTB - DTW	7.84	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS:
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-6	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

WELL ID		TEST PARAMETERS								
OW-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/11	Initial	10:47	8.79	11.7	1.47	955.50	0.74	1.34	719.7
GAUGE TIME		1	10:53							
DHC (FEET)	NA	2	10:59							
DTW (FEET)	1.76	3								
DTB (FEET)	91.91	4								
DTB - DTW	90.15	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	176.50	WEATHER CONDITIONS: Sunny 40°F 12 mph NW								
PURGE DATE	3/14	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	11:00	COMMENTS:								
PURGE AMOUNT	176.50									
DTW (FEET)	88.43									
SAMPLING DATA										
SAMPLE DATE	3/15	WEATHER CONDITIONS: Sunny 45°F								
DTW (FEET)	34.15	WATER APPEARANCE / ODOR: Clear No odor								
SAMPLE TIME	9:00	COMMENTS: DUP collected Dup 3-15-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-1		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-10		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE		Initial	11:57	7.45	9.7	3.38	2197.00	1.78	2.70	129.2
GAUGE TIME		1	11:42	7.44	9.6	3.35	2201.00	1.80	2.68	130.5
DHC (FEET)	NA	2	11:47	7.44	9.4	3.37	2196.50	1.77	2.71	128.9
DTW (FEET)	7.41	3								
DTB (FEET)	64.85	4								
DTB - DTW	57.44	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	112.50	WEATHER CONDITIONS: Cloudy 36°F / snow								
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR: Clear No odor								
END OF PURGE TIME	11:50	COMMENTS:								
PURGE AMOUNT	115.00									
DTW (FEET)	7.45									
SAMPLING DATA										
SAMPLE DATE	3-8-22	WEATHER CONDITIONS: Sunny 30°F								
DTW (FEET)		WATER APPEARANCE / ODOR: clear No odor								
SAMPLE TIME	11:06	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-10		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-12A		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	2:24	7.07	13.0	4.02	2619.50	2.15	0.17	-48.7
GAUGE TIME		1	2:27	7.10	13.3	4.06	2639.00	2.17	0.15	-43.6
DHC (FEET)	N4	2	8:33	7.08	12.9	4.14	2611.50	2.21	0.16	-46.6
DTW (FEET)	25.66	3								
DTB (FEET)	33.50	4								
DTB - DTW	7.84	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.83	WEATHER CONDITIONS: Cloudy/Snow 43°F 19 mph NW								
PURGE DATE	3/21	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	8:35	COMMENTS:								
PURGE AMOUNT	3.85									
DTW (FEET)	32.22									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 30°F 14 mph N wind								
DTW (FEET)	29.80	WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	9:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-12A		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-13		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	3:53	8.13	13.3	0.71	461.50	0.95	0.07	105.4
GAUGE TIME		1	3:57	8.14	13.0	1.19	773.80	0.60	0.06	91.2
DHC (FEET)	—	2	4:05	8.14	12.7	1.05	789.50	0.70	0.57	91.2
DTW (FEET)	20.85	3								
DTB (FEET)	161.70	4								
DTB - DTW	80.85	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	158.06	WEATHER CONDITIONS: Sunny 46°F 15 mph winds N								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	4:05	COMMENTS:								
PURGE AMOUNT	158									
DTW (FEET)	24.83									
SAMPLING DATA										
SAMPLE DATE	3/27	WEATHER CONDITIONS: Sunny 30°F 6 mph NW								
DTW (FEET)	22.32	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-13		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-14		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	4:10	7.21	13.5	1.60	1040.00	0.81	1.80	-75.8
GAUGE TIME		1	4:14	7.73	13.3	1.60	1040.00	0.81	1.93	-75.1
DHC (FEET)	—	2	4:19	7.19	13.3	1.57	1029.50	0.80	1.85	-77.7
DTW (FEET)	22.76	3								
DTB (FEET)	48.41	4								
DTB - DTW	25.65	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	56	WEATHER CONDITIONS: Sunny 43°F								
PURGE DATE	3/23	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	4:20	COMMENTS:								
PURGE AMOUNT	56.00									
DTW (FEET)	29.13									
SAMPLING DATA										
SAMPLE DATE	3/24	WEATHER CONDITIONS: Sunny 43°F								
DTW (FEET)	29.10	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-14		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-30		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	1:36	7.15	12.1	1.97	1280.50	1.01	6.88	-7.2
GAUGE TIME		1	1:35	7.26	11.6	1.96	1274.00	1.00	2.71	5.2
DHC (FEET)	—	2	1:34	7.30	11.00	2.01	1256.50	.98	2.90	3.5
DTW (FEET)	21.95	3								
DTB (FEET)	50.00	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	55	WEATHER CONDITIONS: Sunny 46°F 19 NW Wind								
PURGE DATE	3/23	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	1:40	COMMENTS:								
PURGE AMOUNT	55									
DTW (FEET)	24.96									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 36°F								
DTW (FEET)	21.90	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	8:55	COMMENTS: Dup collected - Dup 3-24-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-30		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-50		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:05	8.25	11.3	1.03	702.00	0.54	2.16	113.0
GAUGE TIME		1	1:09	8.22	11.9	1.90	702.00	0.54	1.87	90.5
DHC (FEET)	NA	2	1:13	8.22	11.3	1.10	745.00	0.55	2.03	99.6
DTW (FEET)	14.90	3								
DTB (FEET)	63.39	4								
DTB - DTW	48.49	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	24.00	WEATHER CONDITIONS: Cloudy 37°F Snow								
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	1:15	COMMENTS:								
PURGE AMOUNT	24.00									
DTW (FEET)	15.49									
SAMPLING DATA										
SAMPLE DATE	3-8-22	WEATHER CONDITIONS: Sunny 48°F								
DTW (FEET)		WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	9:25	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-50		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-52		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:35	8.23	10.2	0.92	598.00	0.46	2.45	35.4
GAUGE TIME		1	1:35	8.23	10.2	0.92	598.00	0.46	2.45	35.4
DHC (FEET)	NA	2	1:39	8.22	10.3	0.95	597.50	0.44	2.45	35.1
DTW (FEET)	14.35	3	1:44	8.22	10.1	0.95	598.56	0.44	2.45	35.2
DTB (FEET)	75.55	4								
DTB - DTW	60.65	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	30.00	WEATHER CONDITIONS: Cloudy 37°F Snow 12 mph NE winds								
PURGE DATE	3-7-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	1:45	COMMENTS:								
PURGE AMOUNT	30.00									
DTW (FEET)	16.68									
SAMPLING DATA										
SAMPLE DATE	3-8-22	WEATHER CONDITIONS: Clear 46°F								
DTW (FEET)	55.23	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-52		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-53		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	—	2								
DTW (FEET)	DRY	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-53		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED OIL / WATER INTERFACE PROBE										

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-54		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:00	7.17	12.0	1.75	1137.50	0.89	6.13	56.8
GAUGE TIME		1	1:04	7.16	11.8	1.73	1144.00	0.90	0.13	55.0
DHC (FEET)	—	2	1:09	7.16	11.8	1.74	1140.50	0.96	0.12	55.1
DTW (FEET)	18.03	3								
DTB (FEET)	29.70	4								
DTB - DTW	11.67	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5.75	WEATHER CONDITIONS: Sunny 43°F 19 mph winds N								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	1:10	COMMENTS:								
PURGE AMOUNT	5.75									
DTW (FEET)	18.43									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 25°F 4 mph NW winds								
DTW (FEET)	19.22	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	4:20	COMMENTS: Dup collected - Dup 3-23-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-54		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-55		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:40	7.08	13.6	1.76	1144.00	0.90	0.13	-75.6
GAUGE TIME		1	1:49	7.07	13.0	1.76	1165.50	0.90	0.12	-77.7
DHC (FEET)	—	2	1:49	7.07	12.8	1.77	1164.00	0.90	0.12	-77.6
DTW (FEET)	18.08	3								
DTB (FEET)	30.32	4								
DTB - DTW	12.24	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	6	WEATHER CONDITIONS: Sunny 44°F 20 mph N winds								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Gray / Hc odor / Green in bucket								
END OF PURGE TIME	1:50	COMMENTS:								
PURGE AMOUNT	18.76									
DTW (FEET)	18.76									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 28°F 6 mph NW								
DTW (FEET)	14.11	WATER APPEARANCE / ODOR: Gray / Hc odor								
SAMPLE TIME	9:16	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-55		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-56		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:55	7.30	10.6	2.36	1534.00	1.22	0.11	13.2
GAUGE TIME		1	2:00	7.30	10.4	2.37	1540.50	1.23	0.12	5.9
DHC (FEET)	—	2	2:05	7.31	10.2	2.37	1560.50	1.23	0.11	6.6
DTW (FEET)	13.30	3								
DTB (FEET)	18.60	4								
DTB - DTW	5.30	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	2.5	WEATHER CONDITIONS: Sunny 44°F 20 mph N winds								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:05	COMMENTS:								
PURGE AMOUNT	2.5									
DTW (FEET)	17.07									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 36°F 6 mph NW								
DTW (FEET)	16.67	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-56		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-57		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/7	Initial	9:25	7.09	12.2	1.48	962	0.75	0.68	-90.3
GAUGE TIME	1:35	1	9:43	7.12	12.4	1.52	98200	0.77	1.74	-63.4
DHC (FEET)	NA	2								
DTW (FEET)	21.80	3								
DTB (FEET)	28.08	4								
DTB - DTW	6.28	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.25	WEATHER CONDITIONS: Cloudy 43°F 12 mph winds SE								
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: Suspended fines - brown / slight odor								
END OF PURGE TIME	13:58	COMMENTS: Purged Dry								
PURGE AMOUNT	.2									
DTW (FEET)	0.1									
SAMPLING DATA										
SAMPLE DATE	3-10-22	WEATHER CONDITIONS: Cloudy 32°F 12 mph SE								
DTW (FEET)	21.78	WATER APPEARANCE / ODOR: Suspended fines - brown / slight odor								
SAMPLE TIME	9:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-57		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-58 <i>A</i>		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	10:25	7.15	10.7	2.27	144950	1.15	1.01	-66.1
GAUGE TIME		1	10:40	7.14	10.7	2.20	145050	1.170	0.98	-66.9
DHC (FEET)		2								
DTW (FEET)	77.56	3								
DTB (FEET)	36.35	4								
DTB - DTW	8.85	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	17.50	WEATHER CONDITIONS: <i>windy 43°F Cloudy</i>								
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: <i>Clear, H/C Odor - Dark Tint toward bottom of well</i>								
END OF PURGE TIME	14:17	COMMENTS: <i>Shoen in bucket</i>								
PURGE AMOUNT	11	<i>Purged Dry</i>								
DTW (FEET)	0.1									
SAMPLING DATA										
SAMPLE DATE	3-10-22	WEATHER CONDITIONS: <i>Cloudy 32°F 70 mph SO</i>								
DTW (FEET)	23.10	WATER APPEARANCE / ODOR: <i>Shoen / H/C odor</i>								
SAMPLE TIME	10:36	COMMENTS: <i>FB collected FB-3-10-22</i>								
SAMPLE LOG										
SAMPLE ID OW-58		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-58		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/1	Initial	2:48	6.98	14.1	1.96	1274	1.01	1.70	-62.2
GAUGE TIME		1	2:52	6.90	12.8	1.98	1287.00	1.02	1.73	-63.6
DHC (FEET)	NA	2	2:55	6.88	12.9	1.98	1287.00	1.02	1.70	-63.4
DTW (FEET)	25.30	3								
DTB (FEET)	47.49	4								
DTB - DTW	22.19	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	11.00	WEATHER CONDITIONS: Cloudy, Windy 40°F								
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: Clear / No Odor								
END OF PURGE TIME	2:56	COMMENTS:								
PURGE AMOUNT	11.00									
DTW (FEET)	25.10									
SAMPLING DATA										
SAMPLE DATE	3-10-22	WEATHER CONDITIONS: Cloudy 32°F 20 mph SE wind								
DTW (FEET)	25.03	WATER APPEARANCE / ODOR: Clear NO odor -								
SAMPLE TIME	10:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-58		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-59		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	2:25	7.38	13.1	10.31	6701.50	5.85	0.10	258.9
GAUGE TIME		1	2:27	7.39	13.1	10.37	6774.00	5.89	0.16	278.2
DHC (FEET)	—	2	2:33	7.39	13.0	10.40	6749.90	5.90	0.10	236.3
DTW (FEET)	23.93	3								
DTB (FEET)	38.60	4								
DTB - DTW	14.67	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7	WEATHER CONDITIONS: Sunny 46°F 17 mph N winds								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Brown / No odor								
END OF PURGE TIME	2:35	COMMENTS:								
PURGE AMOUNT	7.									
DTW (FEET)	35.30									
SAMPLING DATA										
SAMPLE DATE	3/22	WEATHER CONDITIONS: Sunny 36°F 11-14 W winds								
DTW (FEET)	23.93	WATER APPEARANCE / ODOR: Brown / No odor								
SAMPLE TIME	10:10	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-59		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-60		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	10:29	7.60	16.5	6.70	4365	3.68	8180	242.3
GAUGE TIME		1	10:42	7.51	10.3	5.90	4150.8	3.70	563	233.5
DHC (FEET)	—	2								
DTW (FEET)	16.72	3								
DTB (FEET)	43.77	4								
DTB - DTW	27.05	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	13	WEATHER CONDITIONS: Sunny 48°F 16 mph NW winds								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Brown / slight HC odor								
END OF PURGE TIME	3:06	COMMENTS:								
PURGE AMOUNT	8.5									
DTW (FEET)	17.4									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 37°F 11 mph NW								
DTW (FEET)	17.89	WATER APPEARANCE / ODOR: Brown / slight HC odor								
SAMPLE TIME	10:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-60		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-61		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	312	Initial								
GAUGE TIME		1								
DHC (FEET)	21.70	2								
DTW (FEET)	22.40	3								
DTB (FEET)	34.86	4								
DTB - DTW	12.46	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-61		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-62		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	23.77	2								
DTW (FEET)	24.15	3								
DTB (FEET)	32.78	4								
DTB - DTW	8.63	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-62		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-63		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/11	Initial	1:27	7.04	12.8	1.54	1001.00	0.78	1.31	-65.5
GAUGE TIME		1	1:30	7.04	12.3	1.57	1002.00	0.79	1.34	-64.9
DHC (FEET)	NA	2	1:33	6.99	13.2	1.50	1001.50	0.79	1.33	-66.8
DTW (FEET)	21.95	3								
DTB (FEET)	32.22	4								
DTB - DTW	10.27	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	20.00	WEATHER CONDITIONS: Cloudy 42°F 10 mph wind SE								
PURGE DATE	3-9-22	WATER APPEARANCE / ODOR: Clear / HC odor								
END OF PURGE TIME	1:35	COMMENTS:								
PURGE AMOUNT	20.00									
DTW (FEET)	23.90									
SAMPLING DATA										
SAMPLE DATE	3/10	WEATHER CONDITIONS: Very Windy								
DTW (FEET)	22.05	WATER APPEARANCE / ODOR: Clear / HC odor								
SAMPLE TIME	9:30	COMMENTS: PFA's Collected								
SAMPLE LOG										
SAMPLE ID OW-63		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
		250 ML PLASTIC	2		TRISMA					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-64		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	9:29	7.70	10.4	1.77	1150.90	0.90	2.11	-90.2
GAUGE TIME		1	9:45	7.69	10.1	1.76	1144.00	0.90	2.24	-90.1
DHC (FEET)	7.73	2								
DTW (FEET)	7.73	3								
DTB (FEET)	27.40	4								
DTB - DTW	19.67	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	38.50	WEATHER CONDITIONS: Sunny / 48°F / 19 mph NW wind								
PURGE DATE	3/23	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	7:10	COMMENTS: Purged Dry								
PURGE AMOUNT	27.00									
DTW (FEET)	17.24									
SAMPLING DATA										
SAMPLE DATE	3/24	WEATHER CONDITIONS: Sunny 37°F								
DTW (FEET)	7.91	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-64		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

WELL ID		TEST PARAMETERS								
OW-65		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial								
GAUGE TIME		1								
DHC (FEET)	28.08	2								
DTW (FEET)	35.01	3								
DTB (FEET)	39.51	4								
DTB - DTW	4.50	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-65		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-66		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:26	7.07	12.6	2.46	1600.50	1.27	0.12	-91.8
GAUGE TIME		1	1:24	7.06	12.7	2.44	1599.06	1.27	0.11	-90.3
DHC (FEET)	—	2	1:29	7.06	12.1	2.46	1591.50	1.24	0.10	-99.6
DTW (FEET)	17.74	3								
DTB (FEET)	27.81	4								
DTB - DTW	10.13	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	15	WEATHER CONDITIONS: Sunny 47°F 20 mph winds N								
PURGE DATE	3/22	WATER APPEARANCE / ODOR: Brown / HC odor / Sheen in bucket								
END OF PURGE TIME	1:30	COMMENTS:								
PURGE AMOUNT	5									
DTW (FEET)	18.31									
SAMPLING DATA										
SAMPLE DATE	3/23	WEATHER CONDITIONS: Sunny 27°F 6 mph NW								
DTW (FEET)	20.53	WATER APPEARANCE / ODOR: Brown / HC odor								
SAMPLE TIME	8:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-66		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-70		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	3/2	Initial	1:48	7.69	12.6	1.27	799.50	0.62	0.18	78.9
GAUGE TIME		1	1:52	7.73	12.6	1.21	786.50	0.61	0.16	69.7
DHC (FEET)	NA	2	1:56	7.72	12.5	1.39	807.50	0.70	0.14	72.0
DTW (FEET)	31.64	3								
DTB (FEET)	47.71	4								
DTB - DTW	16.07	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	7.85	WEATHER CONDITIONS:	Cloudy 41°F 18 mph NW
PURGE DATE	3/21	WATER APPEARANCE / ODOR:	Brown / No odor
END OF PURGE TIME	1:58	COMMENTS:	
PURGE AMOUNT	3.85		
DTW (FEET)	32.79		

SAMPLING DATA

SAMPLE DATE	3/22	WEATHER CONDITIONS:	Sunny 27°F 13 mph N winds
DTW (FEET)	31.74	WATER APPEARANCE / ODOR:	Brown / No odor
SAMPLE TIME	8:20	COMMENTS:	Dup collected - Dup 3-22-22

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
OW-70	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix A-2. 2nd Quarter Field Logs

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-01R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6.2.22	Initial								
GAUGE TIME		1								
DHC (FEET)	3.30	2								
DTW (FEET)	3.33	3								
DTB (FEET)	18.11	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-01R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-02R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	10.17	2								
DTW (FEET)	10.19	3								
DTB (FEET)	21.50	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-02R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-03		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	7.63	2								
DTW (FEET)	7.78	3								
DTB (FEET)	18.64	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-03		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
MKTf-04R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	9.64	2								
DTW (FEET)	9.65	3								
DTB (FEET)	19.20	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: <i>HAS Product</i>
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS: <i>HAS Product</i>

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-04R	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-05		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	15.78	2								
DTW (FEET)	15.86	3								
DTB (FEET)	17.75	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-05		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-06		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6.2.22	Initial								
GAUGE TIME		1								
DHC (FEET)	18.90	2								
DTW (FEET)	20.10	3								
DTB (FEET)	23.86	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-06		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-07		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	15.12	2								
DTW (FEET)	15.15	3								
DTB (FEET)	17.85	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-07		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-08		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6.2.22	Initial								
GAUGE TIME		1								
DHC (FEET)	15.90	2								
DTW (FEET)	16.68	3								
DTB (FEET)	27.03	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-08		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-09		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	15.13	2								
DTW (FEET)	15.16	3								
DTB (FEET)	22.70	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-09		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-10		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	8.20 8.20	2								
DTW (FEET)	8.35 8.35	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS: Sunny 74°F 13 mph SW winds								
PURGE DATE	6/2/22	WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR: HAS Product								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-10		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-11		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	16:00	6.95	20.4	4.25	2762.50	2.27	0.84	-40.5
GAUGE TIME		1	10:15	6.96	19.1	4.25	2783.00	2.27	0.83	-31.3
DHC (FEET)	NA	2								
DTW (FEET)	8.80	3								
DTB (FEET)	18.50	4								
DTB - DTW	9.70	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	19	WEATHER CONDITIONS: Sunny 72°F 13 SE winds								
PURGE DATE	6-20-22	WATER APPEARANCE / ODOR: Grayish / slight HC odor								
END OF PURGE TIME	12:10	COMMENTS: Purged Dry								
PURGE AMOUNT	15.50									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6/21/22	WEATHER CONDITIONS: Sunny 72°F 6 mph SE winds								
DTW (FEET)	8.85	WATER APPEARANCE / ODOR: Grayish / light HC odor								
SAMPLE TIME	16:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-11		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-12		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	19.20	2								
DTW (FEET)	19.27	3								
DTB (FEET)	25.90	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-12		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-13		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	13.79	2								
DTW (FEET)	15.15	3								
DTB (FEET)	21.75	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-13		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-14		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6.2.22	Initial								
GAUGE TIME		1								
DHC (FEET)	7.25	2								
DTW (FEET)	7.76	3								
DTB (FEET)	17.58	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-14		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY/PARAMETER PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-15		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-27	Initial								
GAUGE TIME		1								
DHC (FEET)	13.21	2								
DTW (FEET)	13.85	3								
DTB (FEET)	19.61	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-15		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-16		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	10:20	7.20	20.1	0.77	500.50	0.38	6.15	-22.3
GAUGE TIME		1	10:35	7.20	20.5	0.78	507.00	0.38	6.04	-22.8
DHC (FEET)	NA	2								
DTW (FEET)	7.83	3								
DTB (FEET)	10.94	4								
DTB - DTW	3.11	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	1.5	WEATHER CONDITIONS:	Sunny 72°F 12 mph SW winds
PURGE DATE	6-20-22	WATER APPEARANCE / ODOR:	Clear / No odor
END OF PURGE TIME	11:45	COMMENTS:	Purged Dry
PURGE AMOUNT	1.00		
DTW (FEET)	DRY		

SAMPLING DATA

SAMPLE DATE	6/21/22	WEATHER CONDITIONS:	Sunny 73°F 6 mph SE winds
DTW (FEET)	9.08	WATER APPEARANCE / ODOR:	Clear / No odor
SAMPLE TIME	10:20	COMMENTS:	NaOH Could only fill 100's, Metals, Filter, and 1 Amber

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-16	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-17R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	13.23	2								
DTW (FEET)	13.43	3								
DTB (FEET)	20.50	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-17R		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-18R		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	10:52	7.02	14.3	1.93	1254.50	0.99	0.48	-129.9
GAUGE TIME		1	10:56	7.02	14.5	1.93	1254.50	1.01	0.50	-141.3
DHC (FEET)	NA	2	10:59	6.91	15.1	1.92	1246.00	0.98	0.47	-98.8
DTW (FEET)	11.13	3								
DTB (FEET)	25.47	4								
DTB - DTW	14.34	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	7.00	WEATHER CONDITIONS: Sunny
PURGE DATE	6-20-22	WATER APPEARANCE / ODOR: Brown / Pinkish / Light HC odor
END OF PURGE TIME	11:06	COMMENTS: Shcen in Buckets
PURGE AMOUNT	7.00	
DTW (FEET)	18.90	

SAMPLING DATA

SAMPLE DATE	6/21/22	WEATHER CONDITIONS: Cloudy / 64°F 5mph E winds
DTW (FEET)	11.21	WATER APPEARANCE / ODOR: Brown / Pink / light HC odor
SAMPLE TIME	8:45	COMMENTS: Shcen in Bucket

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTF-18R ↓	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-19		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	12.96	2								
DTW (FEET)	13.88	3								
DTB (FEET)	19.45	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-19		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-20		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	NA	2								
DTW (FEET)	DRY	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-20		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-21		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	NP	2								
DTW (FEET)	9.85	3								
DTB (FEET)	8.95	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: Not enough fluid to Purge
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA		
SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS: Not enough fluid to Sample

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-21	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-22		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	25.41	2								
DTW (FEET)	27.93	3								
DTB (FEET)	35.70	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-22		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-23		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	14.30	2								
DTW (FEET)	14.35	3								
DTB (FEET)	20.43	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA		
SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-23	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-24		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	23.41	2								
DTW (FEET)	23.43	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS: HAS Product

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-24	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-25		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-27	Initial								
GAUGE TIME		1								
DHC (FEET)	13.63	2								
DTW (FEET)	13.65	3								
DTB (FEET)	20.38	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR: HAS Product								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS: HAS Product								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-25		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-26		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	8.96	2								
DTW (FEET)	8.98	3								
DTB (FEET)	16.90	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-26		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-27		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	9:21	6.73	13.9	11.06	7189.00	6.31	1.41	187.1
GAUGE TIME		1	9:25	6.73	13.7	10.95	7130.50	6.26	1.42	175.3
DHC (FEET)	NA	2	9:30	6.79	14.6	10.90	7130.00	6.22	1.42	163.5
DTW (FEET)	7.12	3								
DTB (FEET)	14.74	4								
DTB - DTW	7.62	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.75	WEATHER CONDITIONS: Sunny 68°F 6mph SW winds								
PURGE DATE	6-23-22	WATER APPEARANCE / ODOR: light Brown / No odor								
END OF PURGE TIME	9:30	COMMENTS:								
PURGE AMOUNT	3.75									
DTW (FEET)	13.08									
SAMPLING DATA										
SAMPLE DATE	6-24-22	WEATHER CONDITIONS: Sunny 64°F 6mph SW winds								
DTW (FEET)	10.04	WATER APPEARANCE / ODOR: light Brown No odor								
SAMPLE TIME	8:30	COMMENTS: Dup collected - Dup-6-24-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-27		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-28		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	9:47	7.14	14.8	4.02	2613.00	2.14	1.57	197.0
GAUGE TIME		1	9:50	7.17	14.8	4.04	2626.00	2.15	1.58	194.7
DHC (FEET)	NA	2	9:54	7.14	14.9	4.00	2600.00	2.13	1.57	194.5
DTW (FEET)	8.86	3								
DTB (FEET)	16.16	4								
DTB - DTW	7.30	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.50	WEATHER CONDITIONS: Sunny 65°F 6 mph SW winds								
PURGE DATE	6-23-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	9:55	COMMENTS:								
PURGE AMOUNT	3.50									
DTW (FEET)	13.40									
SAMPLING DATA										
SAMPLE DATE	6-24-22	WEATHER CONDITIONS: Sunny 65°F 7 mph SW winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-28		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-29		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	6-27-22	Initial	10:40	6.71	12.1	6.16	4004.00	3.37	1.41	106.8
GAUGE TIME		1	10:45	6.74	12.1	6.14	3991.50	3.36	1.53	94.1
DHC (FEET)	NA	2	10:49	6.74	12.3	6.10	3965.00	3.34	1.58	93.7
DTW (FEET)	7.07	3								
DTB (FEET)	72.85	4								
DTB - DTW	15.78	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.75	WEATHER CONDITIONS: Cloudy 63°F								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	10:50	COMMENTS:								
PURGE AMOUNT	7.75									
DTW (FEET)	8.10									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 61°F 3mph SW winds								
DTW (FEET)	7.04	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	8:40	COMMENTS: Dup collected - Dup-6-28-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-29		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-30		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	9:15	7.40	13.5	3.71	2411.50	1.97	4.20	267.1
GAUGE TIME		1	8:30	7.30	14.5	3.71	2411.50	1.98	3.30	240.3
DHC (FEET)	NA	2								
DTW (FEET)	17.63	3								
DTB (FEET)	23.27	4								
DTB - DTW	5.59	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	2.75	WEATHER CONDITIONS: Cloudy 63°F 7mph SW winds								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear/No odor								
END OF PURGE TIME	10:00	COMMENTS:								
PURGE AMOUNT	1.00									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 61°F 3mph SE winds								
DTW (FEET)	17.59	WATER APPEARANCE / ODOR: Clear/No odor								
SAMPLE TIME	8:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-30		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-31		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	2:26	7.20	16.1	2.73	1774.50	1.42	2.29	226.2
GAUGE TIME		1	2:31	7.19	16.0	2.73	1735.50	1.41	2.37	217.2
DHC (FEET)	NA	2	2:35	7.19	16.0	2.72	1720.00	1.41	2.32	214.7
DTW (FEET)	9.22	3								
DTB (FEET)	19.38	4								
DTB - DTW	10.16	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5	WEATHER CONDITIONS: Sunny / cloudy / 78°F 12 mph SE winds								
PURGE DATE	6-21-22	WATER APPEARANCE / ODOR: Brown / no odor								
END OF PURGE TIME	2:35	COMMENTS:								
PURGE AMOUNT	5									
DTW (FEET)	10.22									
SAMPLING DATA										
SAMPLE DATE	6-22	WEATHER CONDITIONS: Cloudy / 63°F 13 mph SE winds								
DTW (FEET)	9.22	WATER APPEARANCE / ODOR: Brown / no odor								
SAMPLE TIME	9:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID MKTf-31		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-32		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	1:26	7.80	17.4	2.37	1540.50	1.22	0.92	194.2
GAUGE TIME		1	1:31	7.78	17.2	2.37	1540.50	1.22	0.90	191.0
DHC (FEET)	NA	2	1:35	7.78	17.2	2.36	1538.50	1.21	0.90	187.4
DTW (FEET)	14.75	3								
DTB (FEET)	27.80	4								
DTB - DTW	13.05	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	6.40	WEATHER CONDITIONS: Sunny 89°F 7 mph W wind
PURGE DATE	6-1-22	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	1:35	COMMENTS:
PURGE AMOUNT	6.56	
DTW (FEET)	24.79	

SAMPLING DATA

SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 84°F 3 mph E wind
DTW (FEET)	14.92	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	11:05	COMMENTS: FR Collected - FR 6-16-22

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-32	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-33		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-22-22	Initial								
GAUGE TIME		1								
DHC (FEET)	23.40	2								
DTW (FEET)	23.46	3								
DTB (FEET)	33.12	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-33		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY/PARAMETER PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-34		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	18.70	2								
DTW (FEET)	18.72	3								
DTB (FEET)	27.72	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-34		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-35		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	6-1-22	Initial	9:05	6.85	17.6	2.24	1456.00	1.16	0.61	-78.5
GAUGE TIME		1	9:25	6.86	17.4	2.31	1437.90	1.16	0.59	-98.2
DHC (FEET)	NA	2								
DTW (FEET)	10.45	3								
DTB (FEET)	16.19	4								
DTB - DTW	6.04	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3	WEATHER CONDITIONS: Sunny 72°F 11 mph SW winds								
PURGE DATE	6-20-21	WATER APPEARANCE / ODOR: Grayish / slight HC odor								
END OF PURGE TIME	11:15	COMMENTS:								
PURGE AMOUNT	1.00									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6/21/22	WEATHER CONDITIONS: Cloudy 66°F 5 mph SE winds								
DTW (FEET)	10.47	WATER APPEARANCE / ODOR: Grayish / light HC odor								
SAMPLE TIME	9:05	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-35		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-36		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	8.35	2								
DTW (FEET)	8.53	3								
DTB (FEET)	15.60	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-36		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-37		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	10.39	2								
DTW (FEET)	10.44	3								
DTB (FEET)	24.70	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-37		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-38		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	9:35	7.56	14.2	2.03	1285.50	1.03	2.46	60.3
GAUGE TIME		1	9:50	7.51	14.1	1.93	1290.00	1.01	2.37	57.4
DHC (FEET)	NA	2								
DTW (FEET)	10.76	3								
DTB (FEET)	20.30	4								
DTB - DTW	9.6	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4.70	WEATHER CONDITIONS: Sunny / 72°F 11mph SW winds								
PURGE DATE	6/20/22	WATER APPEARANCE / ODOR: 5 Brown / white bugs								
END OF PURGE TIME	11:35	COMMENTS:								
PURGE AMOUNT	4									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6/21/22	WEATHER CONDITIONS: Sunny 76°F 6mph SE winds								
DTW (FEET)	11.33	WATER APPEARANCE / ODOR: Brown / white bugs								
SAMPLE TIME	9:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-38		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-39		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	11.25	2								
DTW (FEET)	11.75	3								
DTB (FEET)	15.20	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-39		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

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MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-40		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	2:00	7.24	14.8	10.93	7104.50	6.23	4.93	180.8
GAUGE TIME		1	2:05	7.27	15.1	10.92	7098.00	6.23	4.82	176.8
DHC (FEET)	NA	2	2:10	7.27	15.3	10.92	7099.50	6.22	4.82	165.7
DTW (FEET)	15.54	3								
DTB (FEET)	23.65	4								
DTB - DTW	8.11	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4	WEATHER CONDITIONS: Sunny/Cloudy / 77°F 10 mph SE winds								
PURGE DATE	6-21-22	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	2:10	COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	6-22-22	WEATHER CONDITIONS: Cloudy 61°F 13 mph SE winds								
DTW (FEET)	19.68	WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	8:35	COMMENTS: DUP collected - DUP-6-22-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-40		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-41		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	3:02	8.12	14.3	2.93	1969.50	1.53	0.87	85.2
GAUGE TIME		1	3:06	8.11	14.5	2.93	1902.0	1.53	0.85	84.3
DHC (FEET)	N.A	2	3:09	8.11	14.5	2.93	1900.90	1.52	0.88	84.4
DTW (FEET)	21.38	3								
DTB (FEET)	39.77	4								
DTB - DTW	18.39	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	9	WEATHER CONDITIONS: Sunny 88°F 7mph W winds								
PURGE DATE	6-15-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	3:10	COMMENTS:								
PURGE AMOUNT	9									
DTW (FEET)	32.32									
SAMPLING DATA										
SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 84°F 3mph E winds								
DTW (FEET)	22.09	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:48	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-41		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-42		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	17.25	2								
DTW (FEET)	17.27	3								
DTB (FEET)	18.98	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-42		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY/PARAMETER PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-43		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	2:37	6.54	15.1	31.51	20469.0	19.64	1.37	109.3
GAUGE TIME		1	2:36	6.56	13.9	31.22	20439.50	19.65	1.36	103.4
DHC (FEET)	NA	2	2:40	6.56	13.9	31.22	20940.80	19.65	1.36	101.5
DTW (FEET)	8.04	3								
DTB (FEET)	16.95	4								
DTB - DTW	8.91	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4.5	WEATHER CONDITIONS: Sunny 88°F 7 mph W winds								
PURGE DATE	6-15-22	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	2:40	COMMENTS:								
PURGE AMOUNT	4.5									
DTW (FEET)	12.66									
SAMPLING DATA										
SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 81°F 3 mph E winds								
DTW (FEET)	10.81	WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	10:10	COMMENTS: Dup collected - Dup. 6-16-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTF-43		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-44		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	8:30 8:27	8.27	16.8	1.65	1672.50	0.83	3.73	218.3
GAUGE TIME		1	8:30 8:36	8.36	15.0	1.63	1659.00	0.83	3.61	202.3
DHC (FEET)	N/A	2	F.							
DTW (FEET)	35.78	3								
DTB (FEET)	51.20	4								
DTB - DTW	15.42	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.50	WEATHER CONDITIONS: Sunny 77°F 6mph E winds								
PURGE DATE	6-28-22	WATER APPEARANCE / ODOR: light Brown / No odor								
END OF PURGE TIME	1:05	COMMENTS: Purged Dry								
PURGE AMOUNT	7.00									
DTW (FEET)	Dry									
SAMPLING DATA										
SAMPLE DATE	6-29-22	WEATHER CONDITIONS: Sunny 68°F 6mph SW winds								
DTW (FEET)	48.70	WATER APPEARANCE / ODOR: light Brown / No odor								
SAMPLE TIME	8:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-44		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-45		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mV)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	15.619	2								
DTW (FEET)	15.63	3								
DTB (FEET)	36.50	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HRS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-45		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-46		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	10:21	6.85	14.3	1.76	1144.00	0.90	1.72	26.5
GAUGE TIME		1	10:25	6.90	13.8	1.76	1144.00	0.90	1.75	194.3
DHC (FEET)	NA	2	10:29	6.92	14.1	1.77	1150.00	0.90	1.77	183.6
DTW (FEET)	14.01	3								
DTB (FEET)	21.28	4								
DTB - DTW	7.27	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	3.50	WEATHER CONDITIONS: Sunny 70°F
PURGE DATE	6-20-22	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	10:30	COMMENTS: Clear / NO odor
PURGE AMOUNT	3.50	
DTW (FEET)	18.23	

SAMPLING DATA

SAMPLE DATE	6/21/22	WEATHER CONDITIONS: Cloudy 63°F Sample Winds
DTW (FEET)	8:20 15.46	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	8:20	COMMENTS: DUP collected - DUP- 6-21-22

SAMPLE LOG

SAMPLE ID MKTf-46	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTF-47		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	10.95	2								
DTW (FEET)	11.01	3								
DTB (FEET)	14.35	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTF-47	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-48		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	10.35	2								
DTW (FEET)	11.86	3								
DTB (FEET)	21.05	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA	
3 WELL VOLUMES	WEATHER CONDITIONS:
PURGE DATE	WATER APPEARANCE / ODOR:
END OF PURGE TIME	COMMENTS: HAS Product
PURGE AMOUNT	
DTW (FEET)	

SAMPLING DATA	
SAMPLE DATE	WEATHER CONDITIONS:
DTW (FEET)	WATER APPEARANCE / ODOR:
SAMPLE TIME	COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-48	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-49		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	21.95	2								
DTW (FEET)	27.65	3								
DTB (FEET)	25.00	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
MKTf-49		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY/PARAMETER PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
MKTf-50		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	16.61	2								
DTW (FEET)	16.72	3								
DTB (FEET)	21.75	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA		
SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
MKTf-50	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	8:25	8.80	18.1	1.41	916.50	0.71	1.93	112.4
GAUGE TIME		1	8:50	8.79	18.2	1.41	916.56	0.71	1.13	92.3
DHC (FEET)	NA	2								
DTW (FEET)	1.40	3								
DTB (FEET)	91.91	4								
DTB - DTW	90.51	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA	
3 WELL VOLUMES	177
PURGE DATE	6-14-22
END OF PURGE TIME	11:57
PURGE AMOUNT	75.00
DTW (FEET)	DRY

SAMPLING DATA	
SAMPLE DATE	6-15-22
DTW (FEET)	41.36
SAMPLE TIME	8:25

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
OW-1	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	WATER LEVEL PROBE
	WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-12A		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	1:40	6.92	14.8	3.66	2372.50	1.93	1.12	-51.1
GAUGE TIME		1	1:45	6.94	14.9	3.63	3359.50	1.92	0.97	-67.3
DHC (FEET)	NA	2	1:50	6.94	14.9	3.63	3359.00	1.93	0.95	-68.1
DTW (FEET)	26.26	3								
DTB (FEET)	33.20	4								
DTB - DTW	7.00	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3.50	WEATHER CONDITIONS: Cloudy 70°F 9 mph SW winds								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear / NO odor								
END OF PURGE TIME	10:56	COMMENTS:								
PURGE AMOUNT	3.50									
DTW (FEET)	31.67									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 6 mph SW winds								
DTW (FEET)	30.63	WATER APPEARANCE / ODOR: Clear / NO odor								
SAMPLE TIME	10:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID OW-12A		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-10		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	3:30	7.50	10.1	3.45	2319.00	1.91	2.73	133.7
GAUGE TIME		1	3:40	7.48	9.7	3.43	2276.00	1.88	2.69	130.0
DHC (FEET)	NA	2	3:55	7.48	9.7	3.35	2230.50	1.87	2.67	129.5
DTW (FEET)	7.72	3								
DTB (FEET)	66.46	4								
DTB - DTW	58.74	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	115.00	WEATHER CONDITIONS: Sunny 89°F								
PURGE DATE	6-7-21	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	4:00	COMMENTS:								
PURGE AMOUNT	115.00									
DTW (FEET)	7.85									
SAMPLING DATA										
SAMPLE DATE	6-8-22	WEATHER CONDITIONS: Sunny 75°F 4mph NW winds								
DTW (FEET)	9.68	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:20	COMMENTS: Dup collected - Dup 6-8-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-10		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-13		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial		8.20	13.4	1.20	498.00	0.37	0.16	99.3
GAUGE TIME		1		8.19	13.1	1.19	476.50	0.41	0.11	98.9
DHC (FEET)	NA	2		8.19	12.8	1.18	466.50	0.41	0.11	99.3
DTW (FEET)	21.17	3								
DTB (FEET)	101.70	4								
DTB - DTW	80.53	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	157.75	WEATHER CONDITIONS: Sunny 82°F 5 mph NE winds								
PURGE DATE	6-8-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:45	COMMENTS:								
PURGE AMOUNT	158.00									
DTW (FEET)	23.98									
SAMPLING DATA										
SAMPLE DATE	6-9-22	WEATHER CONDITIONS: Sunny 80°F								
DTW (FEET)	21.22	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-13		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-14		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6/2/22	Initial	1:20	7.00	16.5	1.55	1007.50	0.78	2.02	-83.1
GAUGE TIME		1	1:25	7.01	16.4	1.56	1003.00	0.77	1.85	-88.5
DHC (FEET)	NA	2	1:30	7.03	15.5	1.50	975.00	0.76	1.82	-83.3
DTW (FEET)	24.29	3								
DTB (FEET)	47.30	4								
DTB - DTW	23.01	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	45	WEATHER CONDITIONS: Sunny 81°F 3 mph SW winds								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear / light H2O2								
END OF PURGE TIME	1:30	COMMENTS:								
PURGE AMOUNT	45									
DTW (FEET)	24.35									
SAMPLING DATA										
SAMPLE DATE	6-30-22	WEATHER CONDITIONS: Sunny 68°F								
DTW (FEET)	27.93	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:00	COMMENTS: Dup collected - Dup 6-30-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-14		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

Second QUARTER 2022

OW-29
 GAUGE DATE 6/11/22
 GAUGE TIME
 DHO (FEET) NA
 DTV (FEET) 18.65
 DIF (FEET) 5.40
 DIC - DTV 32.75
 CAPACITY P 0.65
 FOOT 0.16

TEST PARAMETERS

VOLUMES	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
Initial	8:40	7.01	9.7	1.86	1275.50	0.88	1.85	101.2
	8:50	7.02	9.1	1.98	1150.00	0.90	1.86	96.4

PURGING DATA

3 WELL
 VOLUMES 64.00
 PURGE DATE 6/27/22
 END OF
 PURGE TIME 4:00
 PURGE
 AMOUNT 36.00
 DTV (FEET) DR

WEATHER CONDITIONS:
 Sunny
 WATER APPEARANCE / ODOR:
 Clear / No odor
 COMMENTS:
 Purged Dr

SAMPLING DATA

SAMPLE DATE 6/28/22
 DTV (FEET) 17.80
 SAMPLE TIME 8:40

WEATHER CONDITIONS:
 Sunny
 WATER APPEARANCE / ODOR:
 Clear No odor
 COMMENTS:

SAMPLE LOG

CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
40 ML VOA	6	HCL
40 ML VOA	2	NA ₂ S ₂ O ₃
1 LITER AMBER	2	NEAT
600 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
125 ML PLASTIC FILTERED	1	HNO ₃
600 ML PLASTIC	1	NaOH

INSTRUMENTS USED

WATER QUALITY METER

DATE RECEIVED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-30		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6/2/22	Initial	2:25	7.13	14.3	1.78	1157.00	0.91	2.04	-21.3
GAUGE TIME		1	2:30	7.12	14.1	1.78	1163.50	0.91	1.94	-21.3
DHC (FEET)	NA	2	2:35	7.11	14.0	1.79	1168.00	0.90	1.90	-27.0
DTW (FEET)	22.81	3								
DTB (FEET)	50.03	4								
DTB - DTW	27.22	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	53.50	WEATHER CONDITIONS: Sunny 82°F								
PURGE DATE	6-29-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:25	COMMENTS:								
PURGE AMOUNT	54.08									
DTW (FEET)	23.05									
SAMPLING DATA										
SAMPLE DATE	6-30-22	WEATHER CONDITIONS: Sunny 90°F 8 mph SW winds								
DTW (FEET)	22.83	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:45	COMMENTS: FIB collected								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-30		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

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MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-50		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	12:45	8.22	12.4	1.09	708.50	0.54	3.18	122.5
GAUGE TIME		1	11:52	8.23	12.1	1.10	723.50	0.54	3.18	123.7
DHC (FEET)	NA	2	11:59	8.23	12.0	1.10	724.00	0.51	3.19	123.8
DTW (FEET)	15.20	3								
DTB (FEET)	63.30	4								
DTB - DTW	48.10	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	23.50	WEATHER CONDITIONS:								
PURGE DATE	6-8-22	WATER APPEARANCE / ODOR: Sunny 84°F 5 mph NE winds								
END OF PURGE TIME	12:00	COMMENTS: Clear / No odor								
PURGE AMOUNT	23.50									
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	6-9-22	WEATHER CONDITIONS: Sunny 85°F								
DTW (FEET)	15.35	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-50		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

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MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-52		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	12:20	8.60	13.3	0.94	611.00	0.47	0.54	174.8
GAUGE TIME		1	12:24	8.59	14.3	0.94	598.00	0.47	0.53	176.5
DHC (FEET)	NA	2	12:29	8.58	14.3	0.93	591.50	0.47	0.51	170.5
DTW (FEET)	14.50	3								
DTB (FEET)	56.50	4								
DTB - DTW	42	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	20.50	WEATHER CONDITIONS: Sunny 85°F 5 mph NE winds								
PURGE DATE	6-8-21	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	12:30	COMMENTS:								
PURGE AMOUNT	20.50									
DTW (FEET)	16.53									
SAMPLING DATA										
SAMPLE DATE	6-9-22	WEATHER CONDITIONS: Sunny 75°F								
DTW (FEET)	14.65	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-52		40 ML VOA	6		HCL					
		40 ML VOA	2		Na ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER LEVEL PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-53		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	NA	2								
DTW (FEET)	NA	3								
DTB (FEET)	DRY	4								
DTB - DTW	DRY	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	DRY	WEATHER CONDITIONS:								
PURGE DATE	DRY	WATER APPEARANCE / ODOR: Well is Dry								
END OF PURGE TIME	DRY	COMMENTS:								
PURGE AMOUNT	DRY									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	DRY	WEATHER CONDITIONS:								
DTW (FEET)	DRY	WATER APPEARANCE / ODOR:								
SAMPLE TIME	DRY	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-53		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-54		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	2:17	7.28	15.0	1.69	109850	0.86	2.15	-63.5
GAUGE TIME		1	2:21	7.26	14.9	1.74	113100	0.89	2.15	-64.3
DHC (FEET)	NA	2	2:25	7.26	14.8	1.74	113350	0.89	1.91	-66.7
DTW (FEET)	18.35	3								
DTB (FEET)	29.73	4								
DTB - DTW	11.38	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5.50	WEATHER CONDITIONS: Sunny 80°								
PURGE DATE	6-14-22	WATER APPEARANCE / ODOR: Clear / no odor								
END OF PURGE TIME	2:25	COMMENTS:								
PURGE AMOUNT	5.50									
DTW (FEET)	18.75									
SAMPLING DATA										
SAMPLE DATE	6-15-22	WEATHER CONDITIONS: Sunny 70° Small winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Clear / no odor								
SAMPLE TIME	8:10	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-54		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-55		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	3:07	7.15	13.9	1.78	1157.00	0.91	0.76	-112.2
GAUGE TIME		1	3:11	7.13	13.8	1.80	1151.50	0.90	0.76	109.2
DHC (FEET)	NA	2	3:15	7.13	14.3	1.78	1151.50	0.90	0.75	-103.3
DTW (FEET)	18.50	3								
DTB (FEET)	30.20	4								
DTB - DTW	11.7	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	5.75	WEATHER CONDITIONS: Sunny 83°F 14 mph NE winds								
PURGE DATE	6-14-22	WATER APPEARANCE / ODOR: Grayish / Sheen in Buckets								
END OF PURGE TIME	3:15	COMMENTS:								
PURGE AMOUNT	5.75									
DTW (FEET)	18.98									
SAMPLING DATA										
SAMPLE DATE	6-15-22	WEATHER CONDITIONS: Sunny 73°F 5 mph NW winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Grayish / Sheen in Buckets								
SAMPLE TIME	9:48	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-55		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-56		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	10:10	7.31	18.1	2.15	1397.50	1.10	4.25	106.8
GAUGE TIME		1	10:20	7.22	18.3	2.16	1398.50	1.09	4.24	101.5
DHC (FEET)	NA	2								
DTW (FEET)	13.40	3								
DTB (FEET)	18.60	4								
DTB - DTW	5.20	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	255	WEATHER CONDITIONS: Sunny 83°F 14mph NE winds								
PURGE DATE	6-14-22	WATER APPEARANCE / ODOR: Clear/No odor								
END OF PURGE TIME	3:25	COMMENTS:								
PURGE AMOUNT	2.00									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6-15-22	WEATHER CONDITIONS: Sunny 73°F 10mph W winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Clear/No odor								
SAMPLE TIME	10:10	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-56		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-57		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	8:50	7.05	13.0	1.55	1.62	0.70	0.76	-50.3
GAUGE TIME		1	9:05	7.04	12.7	1.53	1.58	0.71	0.78	-40.1
DHC (FEET)	NA	2								
DTW (FEET)	22.35	3								
DTB (FEET)	28.38	4								
DTB - DTW	6.03	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	3	WEATHER CONDITIONS: Sunny 79°F 4 mph E wind								
PURGE DATE	6-28-22	WATER APPEARANCE / ODOR: Brown / light HC odor								
END OF PURGE TIME	1:25	COMMENTS: Purged Dry								
PURGE AMOUNT	1.50									
DTW (FEET)	Dry									
SAMPLING DATA										
SAMPLE DATE	6-29-22	WEATHER CONDITIONS: Sunny 70°F 6 mph SE wind								
DTW (FEET)	22.40	WATER APPEARANCE / ODOR: Brown / light HC odor								
SAMPLE TIME	8:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-57		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-58		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	1:55	6.86	16.1	1.84	1196.00	0.93	1.83	-82.2
GAUGE TIME		1	1:59	6.86	15.8	1.81	1170.56	0.92	1.86	-81.9
DHC (FEET)	NA	2	2:04	6.81	15.2	1.80	1169.00	0.92	1.85	-80.2
DTW (FEET)	25.80	3								
DTB (FEET)	47.47	4								
DTB - DTW	21.67	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	10.50	WEATHER CONDITIONS: Sunny 79°F 10 mph E winds								
PURGE DATE	6-28-22	WATER APPEARANCE / ODOR: Brown / No odor / Sheen in buckets								
END OF PURGE TIME	2:05	COMMENTS:								
PURGE AMOUNT	10.50									
DTW (FEET)	26.81									
SAMPLING DATA										
SAMPLE DATE	6/29	WEATHER CONDITIONS: Sunny 75°F 10 mph SE winds								
DTW (FEET)	25.84	WATER APPEARANCE / ODOR: Brown / No odor / Sheen in bucket								
SAMPLE TIME	9:15	COMMENTS: Dup collected - DUP-6-29-22								
SAMPLE LOG										
SAMPLE ID OW-58		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-58A		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	9:45	7.20	10.5	2.30	1470.50	1.14	1.11	-68.3
GAUGE TIME		1	10:00	7.18	10.4	2.29	1468.00	1.15	1.03	-66.3
DHC (FEET)	NA	2								
DTW (FEET)	28.20	3								
DTB (FEET)	36.35	4								
DTB - DTW	8.15	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	16.00	WEATHER CONDITIONS: Sunny 80°F 4mph E winds								
PURGE DATE	6-28-22	WATER APPEARANCE / ODOR: Grayish / light HC odor / Sheen on bucket								
END OF PURGE TIME	2:25	COMMENTS: Purged Day								
PURGE AMOUNT	8.56									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6-29-22	WEATHER CONDITIONS: Sunny 77°F SW winds								
DTW (FEET)	28.15	WATER APPEARANCE / ODOR: Grayish / light HC odor								
SAMPLE TIME	9:45	COMMENTS: FB collected FB-6-29-22								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-58A		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY METER								

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-59		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	3:36	7.26	14.7	9.61	6246.50	5.43	7.43	88.6
GAUGE TIME		1	3:40	7.27	14.9	9.61	6246.50	5.43	1.44	93.6
DHC (FEET)	NA	2	3:45	7.31	15.1	9.63	6259.50	5.44	1.46	92.7
DTW (FEET)	23.84	3								
DTB (FEET)	38.60	4								
DTB - DTW	14.76	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.25	WEATHER CONDITIONS: Sunny 81°F 12mph NE winds								
PURGE DATE	6-14-22	WATER APPEARANCE / ODOR: Brown/Clear / NO odor								
END OF PURGE TIME	3:45	COMMENTS:								
PURGE AMOUNT	7.25									
DTW (FEET)	33.82									
SAMPLING DATA										
SAMPLE DATE	6-15-22	WEATHER CONDITIONS: Sunny 75°F 7mph W winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Brown / No odor								
SAMPLE TIME	10:40	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-59		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-60		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	8:45	7.61	12.3	6.80	4835.80	3.72	5.93	251.2
GAUGE TIME		1	8:55	7.58	12.1	6.73	4740.00	3.70	5.86	244.5
DHC (FEET)	NA	2								
DTW (FEET)	16.54	3								
DTB (FEET)	46.82	4								
DTB - DTW	30.28	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	14.80	WEATHER CONDITIONS: Sunny 82°F 7mph W winds								
PURGE DATE	6-15-22	WATER APPEARANCE / ODOR: Brownish / slight HC odor								
END OF PURGE TIME	1:25	COMMENTS: Purged Dry								
PURGE AMOUNT	8.50									
DTW (FEET)	dry									
SAMPLING DATA										
SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 77°F 4mph E winds								
DTW (FEET)	34.83	WATER APPEARANCE / ODOR: Brownish / slight HC odor								
SAMPLE TIME	8:45	COMMENTS:								
SAMPLE LOG										
SAMPLE ID OW-60		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-61		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	24.68	2								
DTW (FEET)	25.39	3								
DTB (FEET)	34.86	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-61		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-62		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	23.75	2								
DTW (FEET)	24.10	3								
DTB (FEET)	32.78	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-62		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-63		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-7-22	Initial	3:20	7.05	14.4	1.49	968.50	0.75	1.48	-98.8
GAUGE TIME		1	3:25	7.02	14.8	1.50	992.00	0.73	1.47	-97.7
DHC (FEET)	NA	2	3:30	7.02	14.7	1.51	958.50	0.73	1.47	-97.5
DTW (FEET)	82.51	3								
DTB (FEET)	32.22	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	19.00	WEATHER CONDITIONS: Sunny 88 °F								
PURGE DATE	6-7-22	WATER APPEARANCE / ODOR: Clear / light HC odor								
END OF PURGE TIME	3:30	COMMENTS:								
PURGE AMOUNT	19.00									
DTW (FEET)	24.39									
SAMPLING DATA										
SAMPLE DATE	6-8-22	WEATHER CONDITIONS: Sunny 70°F 4mph SW wind								
DTW (FEET)	22.52	WATER APPEARANCE / ODOR: Clear / Light HC odor								
SAMPLE TIME	8:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-63		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
		250 ML PLASTIC	2		TRISMA					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-64		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	8:50	7.49	14.7	1.57	1020.50	0.80	3.41	97.4
GAUGE TIME		1	9:05	7.52	15.1	1.57	1010.50	0.81	3.35	89.8
DHC (FEET)	NA	2								
DTW (FEET)	8.14	3								
DTB (FEET)	24.30	4								
DTB - DTW	16.16	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	31.75	WEATHER CONDITIONS: Sunny 88°F								
PURGE DATE	6-7-22	WATER APPEARANCE / ODOR: Yellowish / No odor								
END OF PURGE TIME	3:10	COMMENTS: Purged Dry								
PURGE AMOUNT	21.25									
DTW (FEET)	DRY									
SAMPLING DATA										
SAMPLE DATE	6-8-21	WEATHER CONDITIONS: Sunny 72°F								
DTW (FEET)	8.83	WATER APPEARANCE / ODOR: Yellowish / No odor								
SAMPLE TIME	8:50	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-64		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
OW-65		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	/							
GAUGE TIME		1								
DHC (FEET)	27.97	2								
DTW (FEET)	34.93	3								
DTB (FEET)	39.51	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-65		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-66		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	2:43	7.15	13.8	2.32	1508.0	1.20	1.06	-103.6
GAUGE TIME	NA	1	2:46	7.16	13.6	2.29	1498.00	1.20	1.03	-96.7
DHC (FEET)	NA	2	2:50	7.16	13.8	2.29	1501.50	1.19	0.99	-95.4
DTW (FEET)	18.20	3								
DTB (FEET)	77.75	4								
DTB - DTW	9.54	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	4.60	WEATHER CONDITIONS: Sunny 83°F 14 mph NE winds								
PURGE DATE	6-14-22	WATER APPEARANCE / ODOR: Brown / Green in Bucket								
END OF PURGE TIME	2.50	COMMENTS:								
PURGE AMOUNT	4.75									
DTW (FEET)	18.57									
SAMPLING DATA										
SAMPLE DATE	6-15-22	WEATHER CONDITIONS: Sunny 72°F 5 mph NW winds								
DTW (FEET)	21.50	WATER APPEARANCE / ODOR: Brown / Green in bottles								
SAMPLE TIME	9:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-66		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-67		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	2:06	6.59	14.9	15.75	10237.00	9.23	2.09	102.9
GAUGE TIME		1	2:11	6.60	14.7	15.74	10231.50	9.23	2.09	100.7
DHC (FEET)	NA	2	2:14	6.60	14.7	16.00	10246.80	9.24	2.03	98.6
DTW (FEET)	12.46	3								
DTB (FEET)	27.43	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.32	WEATHER CONDITIONS: Sunny 84°F 7 mph W winds								
PURGE DATE	6-15-22	WATER APPEARANCE / ODOR: Brown / Slight odor								
END OF PURGE TIME	2:15	COMMENTS:								
PURGE AMOUNT	7.50									
DTW (FEET)	16.70									
SAMPLING DATA										
SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 74°F Slight E winds								
DTW (FEET)	12.60	WATER APPEARANCE / ODOR: Brown / Slight odor								
SAMPLE TIME	9:45	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-67		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-68		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	1:43	6.84	15.3	13.90	9035.00	8.07	1.51	-77.3
GAUGE TIME		1	1:46	6.85	15.1	14.04	9132.50	8.17	1.49	-88.8
DHC (FEET)	NA	2	1:50	6.85	14.1	14.04	9130.50	8.17	1.49	-89.5
DTW (FEET)	14.18	3								
DTB (FEET)	28.20	4								
DTB - DTW	14.02	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	6.85	WEATHER CONDITIONS: Sunny 84°F 7 mph W winds								
PURGE DATE	6-15-22	WATER APPEARANCE / ODOR: Brown / slight odor								
END OF PURGE TIME	1:50	COMMENTS:								
PURGE AMOUNT	7.00									
DTW (FEET)	17.69									
SAMPLING DATA										
SAMPLE DATE	6-16-22	WEATHER CONDITIONS: Sunny 73°F 4 mph E winds								
DTW (FEET)	14.65	WATER APPEARANCE / ODOR: Brown / slight odor								
SAMPLE TIME	9:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
OW-68		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OW-70		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial	2:12	7.50	14.9	1.23	799.50	0.61	1.16	632
GAUGE TIME		1	2:16	7.64	14.9	1.11	781.50	0.55	0.06	48.1
DHC (FEET)		2	2:20	7.65	15.1	1.15	781.00	0.57	1.05	49.7
DTW (FEET)	32.12	3								
DTB (FEET)	47.72	4								
DTB - DTW	15.60	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.75	WEATHER CONDITIONS: Cloudy 70°F 7 mph SW wind								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	2:20	COMMENTS:								
PURGE AMOUNT	7.75									
DTW (FEET)	33.78									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 70°F 5 mph SW wind								
DTW (FEET)	32.12	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	10:20	COMMENTS: FB-6-28-22								
SAMPLE LOG										
SAMPLE ID OW-70		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
WEST LDU		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	---	Initial								
GAUGE TIME	---	1								
DHC (FEET)	---	2								
DTW (FEET)	---	3								
DTB (FEET)	---	4								
DTB - DTW	---	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	---	WEATHER CONDITIONS:								
PURGE DATE	---	WATER APPEARANCE / ODOR:								
END OF PURGE TIME	---	COMMENTS:								
PURGE AMOUNT	---									
DTW (FEET)	✓									
SAMPLING DATA										
SAMPLE DATE	6-14-22	WEATHER CONDITIONS: Sunny 76°F 10 mph NE winds								
DTW (FEET)		WATER APPEARANCE / ODOR: Yellowish / No odor								
SAMPLE TIME	10:15	COMMENTS:								
SAMPLE LOG										
SAMPLE ID WEST LDU		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY:

SIGNATURE:

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
EAST LDU		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	---	Initial								
GAUGE TIME	---	1								
DHC (FEET)	NA	2								
DTW (FEET)	---	3								
DTB (FEET)	---	4								
DTB - DTW	---	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	---	WEATHER CONDITIONS:								
PURGE DATE	---	WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	6-14-22	WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME	9:40	COMMENTS:								
SAMPLE LOG										
SAMPLE ID EAST LDU		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED OIL / WATER INTERFACE PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
OAPIS-1		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6/2/22	Initial	9:10	6.46	14.3	5.11	3321.50	2.77	0.47	-90.7
GAUGE TIME		1	9:25	6.68	14.0	5.12	3230.50	2.75	0.48	-87.6
DHC (FEET)	NA	2								
DTW (FEET)	12.78	3								
DTB (FEET)	77.96	4								
DTB - DTW	15.18	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	7.5	WEATHER CONDITIONS: Cloudy 63°F 7 mph SW winds								
PURGE DATE	6-28-22	WATER APPEARANCE / ODOR: Yellowish / light HC odor								
END OF PURGE TIME	10:30	COMMENTS: Purged Dry								
PURGE AMOUNT	6									
DTW (FEET)	25-04 DRY									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 64°F 3 mph SW winds								
DTW (FEET)	22.60	WATER APPEARANCE / ODOR: Yellowish / light HC odor								
SAMPLE TIME	9:16	COMMENTS:								
SAMPLE LOG										
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE						
OAPIS-1	40 ML VOA	6		HCL						
	40 ML VOA	2		NA ₂ S ₂ O ₃						
	1 LITER AMBER	2		NEAT						
	500 ML AMBER	1		NEAT						
	250 ML PLASTIC	1		HNO ₃						
	125 ML PLASTIC FILTERED	1		HNO ₃						
	500 ML PLASTIC	1		NaOH						
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY METER										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
NAPIS-2		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	9:25	7.00	17.2	1.98	1287.00	1.01	0.57	-56.2
GAUGE TIME		1	9:25	7.01	17.0	2.01	1306.50	1.01	0.58	-55.2
DHC (FEET)	NA	2								
DTW (FEET)	10.05	3								
DTB (FEET)	14.65	4								
DTB - DTW	4.60	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	2.25	WEATHER CONDITIONS: Sunny 71°F 7 mph SW winds
PURGE DATE	6-2-22	WATER APPEARANCE / ODOR: Clear / No odor
END OF PURGE TIME	10:30	COMMENTS: Purged Dry
PURGE AMOUNT	1.75	
DTW (FEET)	DRY	

SAMPLING DATA

SAMPLE DATE	6-23-22	WEATHER CONDITIONS: Sunny 65°F 7 mph SW winds
DTW (FEET)	10.02	WATER APPEARANCE / ODOR: Clear / No odor
SAMPLE TIME	9:25	COMMENTS:

SAMPLE LOG

SAMPLE ID NAPIS-2	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
NAPIS-3		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	10:55	7.05	15.8	2.37	1534.00	1.22	1.36	-60.4
GAUGE TIME		1	11:00	7.09	15.1	2.33	1514.00	1.20	1.38	-56.4
DHC (FEET)	NA	2	11:04	7.08	15.7	2.31	1501.50	1.19	1.42	-56.9
DTW (FEET)	10.01	3								
DTB (FEET)	24.32	4								
DTB - DTW	14.31	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES	7	WEATHER CONDITIONS: Sunny 72°F 7 mph SW winds
PURGE DATE	6-23-22	WATER APPEARANCE / ODOR: Clear turned Brown / no odor
END OF PURGE TIME	11:05	COMMENTS:
PURGE AMOUNT	7	
DTW (FEET)	20.55	

SAMPLING DATA		
SAMPLE DATE	6-24-22	WEATHER CONDITIONS: Sunny 65°F 7 mph SW winds
DTW (FEET)	10.01	WATER APPEARANCE / ODOR: Clear / no odor
SAMPLE TIME	9:45	COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
NAPIS-3	40 ML VOA	6	HCL
	40 ML VOA	2	Na ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
KA-3		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	16:05	7.32	17.0	2.34	1521.00	1.21	1.37	76.2
GAUGE TIME		1	10:10	7.30	17.0	2.30	1439.00	1.20	1.35	68.3
DHC (FEET)		2								
DTW (FEET)	10.95	3								
DTB (FEET)	31.65	4								
DTB - DTW	20.7	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	10	WEATHER CONDITIONS: Sunny 73°F 7 mph SW wind
PURGE DATE	6-23-22	WATER APPEARANCE / ODOR: Purged Dry Clear / No color
END OF PURGE TIME	11:20	COMMENTS: Purged Dry
PURGE AMOUNT	4	
DTW (FEET)	Dry	

SAMPLING DATA

SAMPLE DATE	6-24-22	WEATHER CONDITIONS: Sunny 66°F @ 70°F 7 mph SW wind
DTW (FEET)	11.15	WATER APPEARANCE / ODOR: Clear / No color
SAMPLE TIME	10:05	COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
KA-3	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
NAPIS-1		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	7.415	2								
DTW (FEET)	7.48	3								
DTB (FEET)	13.95	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4" 0.163 - 2"	6								

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
NAPIS-1	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
STP-1-NW		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial	17:50	7.82	15.7	6.55	4257.00	3.60	2.62	42.0
GAUGE TIME		1	11:55	7.74	14.5	6.56	4264.00	3.63	3.12	58.5
DHC (FEET)		2	12:00	7.75	14.7	6.60	4290.00	3.67	2.92	62.9
DTW (FEET)	21.27	3								
DTB (FEET)	49.49	4								
DTB - DTW	28.22	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	14	WEATHER CONDITIONS: Cloudy 64°F 7 mph SW winds								
PURGE DATE	6-27-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	12:00	COMMENTS:								
PURGE AMOUNT	14									
DTW (FEET)	44.30									
SAMPLING DATA										
SAMPLE DATE	6-28-22	WEATHER CONDITIONS: Sunny 66°F 4 mph SW winds								
DTW (FEET)	39.15	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:35	COMMENTS:								
SAMPLE LOG										
SAMPLE ID STP-1-NW	CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE						
	40 ML VOA	6		HCL						
	40 ML VOA	2		NA ₂ S ₂ O ₃						
	1 LITER AMBER	2		NEAT						
	500 ML AMBER	1		NEAT						
	250 ML PLASTIC	1		HNO ₃						
	125 ML PLASTIC FILTERED	1		HNO ₃						
	500 ML PLASTIC	1		NaOH						
INSTRUMENTS USED										
OIL / WATER INTERFACE PROBE										
WATER QUALITY METER										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
STP-1-SW		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)	DRY	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
STP-1-SW		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
GWM-1		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	21.03	2								
DTW (FEET)	13.20	3								
DTB (FEET)	26.40	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: HAS Product								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE							
GWM-1	40 ML VOA	6	HCL							
	40 ML VOA	2	NA ₂ S ₂ O ₃							
	1 LITER AMBER	2	NEAT							
	500 ML AMBER	1	NEAT							
	250 ML PLASTIC	1	HNO ₃							
	125 ML PLASTIC FILTERED	1	HNO ₃							
	500 ML PLASTIC	1	NaOH							
INSTRUMENTS USED OIL / WATER INTERFACE PROBE										

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
GWM-2		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)	DRY	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
GWM-2		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
GWM-3		Volumes	TIME	pH	Temperature Degrees (°C)	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-1-22	Initial								
GAUGE TIME		1								
DHC (FEET)	DRY	2								
DTW (FEET)	DRY	3								
DTB (FEET)	DRY	4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS: DRY								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE		WEATHER CONDITIONS:								
DTW (FEET)		WATER APPEARANCE / ODOR:								
SAMPLE TIME		COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
GWM-3		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED OIL / WATER INTERFACE PROBE										

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
PW-3		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mV)
GAUGE DATE	---	Initial	8:30	7.32	18.4	127	825.00	0.64	3.03	109.1
GAUGE TIME	---	1								
DHC (FEET)	---	2								
DTW (FEET)	---	3								
DTB (FEET)	---	4								
DTB - DTW	---	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	---	WEATHER CONDITIONS:								
PURGE DATE	---	WATER APPEARANCE / ODOR:								
END OF PURGE TIME	---	COMMENTS:								
PURGE AMOUNT	---									
DTW (FEET)	---									
SAMPLING DATA										
SAMPLE DATE	6-14-22	WEATHER CONDITIONS: Sunny 74°F								
DTW (FEET)	---	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	8:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
PW-3		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
PW-4		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	---	Initial	9:00	7.14	18.2	0.95	61750	0.47	2.69	65.5
GAUGE TIME	---	1								
DHC (FEET)	---	2								
DTW (FEET)	---	3								
DTB (FEET)	---	4								
DTB - DTW	---	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES		WEATHER CONDITIONS:								
PURGE DATE		WATER APPEARANCE / ODOR:								
END OF PURGE TIME		COMMENTS:								
PURGE AMOUNT										
DTW (FEET)										
SAMPLING DATA										
SAMPLE DATE	6.15.22	WEATHER CONDITIONS: Sunny 75°F								
DTW (FEET)	---	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:00	COMMENTS:								
SAMPLE LOG										
SAMPLE ID PW-4		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		WATER QUALITY METER								

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
BW-5B		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-1-22	Initial	1:37	7.56	13.3	5.50	3581.50	2.99	1.48	-20.5
GAUGE TIME	—	1	1:41	7.55	13.2	5.48	3550.00	2.98	1.49	-21.4
DHC (FEET)	NA	2	1:45	7.49	13.4	5.45	3550.50	2.98	1.49	-25.5
DTW (FEET)	10.10	3								
DTB (FEET)	54.35	4								
DTB - DTW	44.25	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES	21.63	WEATHER CONDITIONS:	Sunny 70°F
PURGE DATE	6-8-22	WATER APPEARANCE / ODOR:	Clear / No odor
END OF PURGE TIME	1:45	COMMENTS:	Purged DR
PURGE AMOUNT	9:00		
DTW (FEET)	DR1		

SAMPLING DATA

SAMPLE DATE	6-9-22	WEATHER CONDITIONS:	Sunny 70°F
DTW (FEET)	40.53	WATER APPEARANCE / ODOR:	Clear / No odor
SAMPLE TIME		COMMENTS:	

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
BW-5B	40 ML VOA	6	HCL
	40 ML VOA	2	Na ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
BW-5C		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (%)	ORP (mv)
GAUGE DATE	6-1-22	Initial	9:30	7.46	11.3	5.55	3727.50	3.00	3.20	-20.7
GAUGE TIME		1	9:36	7.47	11.0	5.50	3765.50	2.98	3.21	-20.1
DHC (FEET)	NA	2	9:43	7.47	11.0	5.50	3750.00	2.98	3.21	-19.8
DTW (FEET)	3.98	3								
DTB (FEET)	69.65	4								
DTB - DTW	65.58	5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									
PURGING DATA										
3 WELL VOLUMES	32.00	WEATHER CONDITIONS: Sunny 90°F								
PURGE DATE	6-8-22	WATER APPEARANCE / ODOR: Clear / No odor								
END OF PURGE TIME	9:45	COMMENTS:								
PURGE AMOUNT	32.00									
DTW (FEET)	5.50									
SAMPLING DATA										
SAMPLE DATE	6-9-22	WEATHER CONDITIONS: Sunny 70°F								
DTW (FEET)	4.13	WATER APPEARANCE / ODOR: Clear / No odor								
SAMPLE TIME	9:30	COMMENTS:								
SAMPLE LOG										
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE					
BW-5C		40 ML VOA	6		HCL					
		40 ML VOA	2		NA ₂ S ₂ O ₃					
		1 LITER AMBER	2		NEAT					
		500 ML AMBER	1		NEAT					
		250 ML PLASTIC	1		HNO ₃					
		125 ML PLASTIC FILTERED	1		HNO ₃					
		500 ML PLASTIC	1		NaOH					
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE								
		WATER QUALITY/PARAMETER PROBE								

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

WELL ID		TEST PARAMETERS								
RW-1		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	30.98	2								
DTW (FEET)	31.10	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-1	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
 WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-2R		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	23.20	2								
DTW (FEET)	25.55	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA		
3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA		
SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-2R	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	OIL / WATER INTERFACE PROBE
	WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-5		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	30.96	2								
DTW (FEET)	33.18	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-5	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
RW-6		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		1								
DHC (FEET)	30.35	2								
DTW (FEET)	33.00	3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.653 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:
PURGE DATE		WATER APPEARANCE / ODOR:
END OF PURGE TIME		COMMENTS: HAS Product
PURGE AMOUNT		
DTW (FEET)		

SAMPLING DATA

SAMPLE DATE		WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
RW-6	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED OIL / WATER INTERFACE PROBE
WATER QUALITY/PARAMETER PROBE

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

Second QUARTER 2022

WELL ID		TEST PARAMETERS								
Oil Sump LDU		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6-2-22	Initial								
GAUGE TIME		2								
DHC (FEET)		7								
DTW (FEET)		3								
DTB (FEET)		1								
DTB - DTW		3								
CAPACITY PER FOOT	0.853 - 4	3								
	0.167 - 2									

PURGING DATA

3 WELL VOLUMES	WEATHER CONDITIONS:
PURGE DATE	WATER APPEARANCE / ODOR:
END OF PURGE TIME	COMMENTS: <i>Never Sampled</i>
PURGE AMOUNT	
DTW (FEET)	

SAMPLING DATA

SAMPLE DATE	WEATHER CONDITIONS:
DTW (FEET)	WATER APPEARANCE / ODOR:
SAMPLE TIME	COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH

INSTRUMENTS USED	WATER QUALITY METER
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COMPLETED BY:

SIGNATURE:

MARATHON PETROLEUM COMPANY - GALLUP REFINERY
SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
STP-1 to EP-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6/24/22	Initial	10:30	8.25	12.0	3.15	1986	1.70	3.98	205.2
GAUGE TIME		1	10:40	8.24	12.3	3.10	2016	1.65	3.95	203.2
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.74 - 4" 0.163 - 2"	6								

PURGING DATA

3 WELL VOLUMES	WEATHER CONDITIONS:
PURGE DATE	WATER APPEARANCE / ODOR:
END OF PURGE TIME	COMMENTS:
PURGE AMOUNT	
DTW (FEET)	

SAMPLING DATA

SAMPLE DATE	6/24	WEATHER CONDITIONS:
DTW (FEET)		WATER APPEARANCE / ODOR: Sunny
SAMPLE TIME	10:30	COMMENTS: Greenish / slight odor

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	5	HCL
	40 ML VOA	3	NA ₂ S ₂ O ₃
	1 LITER AMBER		NEAT
	250 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	H ₂ SO ₄
	125 ML PLASTIC	1	NEAT
INSTRUMENTS USED	OIL / WATER INTERFACE PROBE		
	WATER QUALITY METER		

COMPLETED BY:

SIGNATURE:

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

SECOND QUARTER 2020 7

WELL ID		TEST PARAMETERS								
EP-2		Volumes	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
GAUGE DATE	6/13/20	Initial	10:50	7.75	4.0	11.20	8650	7.43	5.40	220.9
GAUGE TIME		1	11:00	7.70	3.8	11.15	8430	7.30	5.28	210.0
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.74 - 4" 0.168 - 2"	6								

PURGING DATA

3 WELL VOLUMES	WEATHER CONDITIONS:
PURGE DATE	WATER APPEARANCE / ODOR:
END OF PURGE TIME	COMMENTS:
PURGE AMOUNT	
DTW (FEET)	

SAMPLING DATA

SAMPLE DATE	6/24	WEATHER CONDITIONS:
DTW (FEET)	10:50	WATER APPEARANCE / ODOR:
SAMPLE TIME		COMMENTS:

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	5	HCL
	40 ML VOA	3	NA ₂ S ₂ O ₃
	1 LITER AMBER		NEAT
	250 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	H ₂ SO ₄
	125 ML PLASTIC	1	NEAT
INSTRUMENTS USED	OIL / WATER INTERFACE PROBE		
	WATER QUALITY METER		

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-3		

SAMPLING DATA							
TEST PARAMETERS							
TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR: DRY

COMMENTS:

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-3	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-4		

SAMPLING DATA

	TEST PARAMETERS							
	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

DRX

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-4	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-5		

SAMPLING DATA								
	TEST PARAMETERS							
	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS: **DRY**

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-5	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED	WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

SECOND QUARTER 2022

WELL ID		TEST PARAMETERS								
		VOLUME	TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
EP-6										
GAUGE DATE	6/23/22	Initial	11:10	7.48	5.1	29.40	16442.0	15.60	3.0	268.7
GAUGE TIME		1	11:20	7.45	5.1	20.21	16161.50	15.49	3.1	232.6
DHC (FEET)		2								
DTW (FEET)		3								
DTB (FEET)		4								
DTB - DTW		5								
CAPACITY PER FOOT	0.74 - 4"	6								
	0.163 - 2"									

PURGING DATA

3 WELL VOLUMES		WEATHER CONDITIONS:	
PURGE DATE		WATER APPEARANCE / ODOR:	
END OF PURGE TIME		COMMENTS:	
PURGE AMOUNT			
DTW (FEET)			

SAMPLING DATA

SAMPLE DATE	6/24	WEATHER CONDITIONS:	Sunny
DTW (FEET)		WATER APPEARANCE / ODOR:	Greenish / Slight odor
SAMPLE TIME	11:10	COMMENTS:	

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
	40 ML VOA	5	HCL
	40 ML VOA	3	NA ₂ S ₂ O ₃
	1 LITER AMBER		NEAT
	250 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC	1	H ₂ SO ₄
	125 ML PLASTIC	1	NEAT
INSTRUMENTS USED		OIL / WATER INTERFACE PROBE	
		WATER QUALITY METER	

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-7		

SAMPLING DATA

TEST PARAMETERS							
TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

DRY

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-7	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

POND ID	SAMPLE DATE	SAMPLE TIME
EP-8		

SAMPLING DATA

TEST PARAMETERS							
TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

DRY

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-8	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-9		

SAMPLING DATA							
TEST PARAMETERS							
TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS: DRY

SAMPLE LOG			
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-9	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME
EP-11		

SAMPLING DATA								
	TEST PARAMETERS							
	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
WEATHER CONDITIONS:								
WATER APPEARANCE / ODOR:								
COMMENTS: DRX								
SAMPLE LOG								
SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE					
EP-11	40 ML VOA	6	HCL					
	40 ML VOA	2	NA ₂ S ₂ O ₃					
	1 LITER AMBER	2	NEAT					
	500 ML AMBER	1	NEAT					
	250 ML PLASTIC	1	HNO ₃					
	125 ML PLASTIC FILTERED	1	HNO ₃					
	500 ML PLASTIC	1	NaOH					
	1 LITER PLASTIC	1	NEAT					
	500 ML PLASTIC	1	NA ₂ SO ₃					
	100 ML PLASTIC	1	NEAT					
INSTRUMENTS USED	WATER QUALITY METER							

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

SECOND QUARTER 2022

POND ID	SAMPLE DATE	SAMPLE TIME							
EP-12A									
SAMPLING DATA									
	TEST PARAMETERS								
	TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)		ORP (mv)
WATER APPEARANCE / ODOR:									
COMMENTS: DRX									
SAMPLE LOG									
SAMPLE ID	TIME	CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE				
SAMPLE ID		CONTAINER TYPE	NUMBER OF CONTAINERS		PRESERVATIVE				
EP-12A		40 ML VOA	6		HCL				
		40 ML VOA	2		NA ₂ S ₂ O ₃				
		1 LITER AMBER	2		NEAT				
		500 ML AMBER	1		NEAT				
		250 ML PLASTIC	1		HNO ₃				
		125 ML PLASTIC FILTERED	1		HNO ₃				
		500 ML PLASTIC	1		NaOH				
		1 LITER PLASTIC	1		NEAT				
		500 ML PLASTIC	1		NA ₂ SO ₃				
		100 ML PLASTIC	1		NEAT				
WATER QUALITY METER									

COMPLETED BY: _____

SIGNATURE: _____

**MARATHON GALLUP REFINERY
SECOND QUARTER 2022**

POND ID	SAMPLE DATE	SAMPLE TIME
EP-12B		

SAMPLING DATA

TEST PARAMETERS							
TIME	pH	Temperature Degrees C	Conductivity (mS/cm)	TDS (mg/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

DRX

SAMPLE LOG

SAMPLE ID	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
EP-12B	40 ML VOA	6	HCL
	40 ML VOA	2	NA ₂ S ₂ O ₃
	1 LITER AMBER	2	NEAT
	500 ML AMBER	1	NEAT
	250 ML PLASTIC	1	HNO ₃
	125 ML PLASTIC FILTERED	1	HNO ₃
	500 ML PLASTIC	1	NaOH
	1 LITER PLASTIC	1	NEAT
	500 ML PLASTIC	1	NA ₂ SO ₃
	100 ML PLASTIC	1	NEAT

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix A-3. 3rd Quarter Field Logs

J. J. MILLER

PLASTIC

2:1AL PLASTIC FILTERED

Journal Plastic

CONFIDENTIAL NUMBER

NUMBER

von 100

400-700

CLASS TYPE

PRESERVATIVE

NUMBER OF CONTAINERS

SAMPLE LOG

2103E / ODOR:

SAMPLING DATA

ODOR

PURGING DATA

TEST PARAMETERS

1ST QUARTER 2022

127-4441 HON GALLUP REFINERY

3.42
3.45

STATION HON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

DDOR:

Has Product

SAMPLING DATA

ODOR:

SAMPLE LOG

PRESERVATIVE

TYPE

9

HCL

$$\text{Na}_2\text{S}_2\text{O}_3$$

2

NEAT

T

NEAT

T

 ε_{ONH}

7

 NaOH

WILLER

SIGNATURE:

Released to Imaging: 8/14/2026 5:09:31 PM

FIRST QUARTER 2022

TIME	pH	Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
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ISNOLMCO

REG-117E

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Swimming Pool

2100 E. WMS

PRESERVATIVE

CONTAINER TYPE	NUMBER OF CONTAINERS	TESTING NAME
10 ML VOA	6	HCL
10 ML VOA	2	NA ₂ S ₂ O ₃
2 LITER AMBER	2	NEAT
100 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
25 ML PLASTIC FILTERED	1	HNO ₃
100 ML PLASTIC	1	NaOH

500 1430

MAKRAHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

NYMLER

[illegible]

IMPAHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

ODOR: 1

WAS Product

~~SECRET~~

NUMBER OF CONTAINERS
PRESERVATIVE

0.1 M POA	6	HCL
0.1 M POA	2	Na ₂ S ₂ O ₃
0.1 M AMBER	2	NEAT
0.1 M AMBER	1	NEAT
0.1 M PLASTIC	1	HNO ₃
0.1 M PLASTIC FILTERED	1	HNO ₃
0.1 M PLASTIC	1	NaOH

THE JOURNAL OF THE

ABRAHAM GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

ODOR

HTS Product

~~SECRET~~ / ~~ODOR~~

PRESERVATIVE

100 ML PLASTIC	1	NaOH
100 ML PLASTIC FILTERED	1	HNO ₃
50 ML PLASTIC	1	HNO ₃
100 ML AMBER	1	NEAT
100 ML AMBER	2	NEAT
100 ML VOA	2	Na ₂ S ₂ O ₃
100 ML VOA	6	HCL

WINTER

SIGNATURE:

ER

COJOURNAL, PLASTIC

2.5 ml PLASTIC FILTERED

3000-PLASTIC

NUMBER

53. AMBER

VOA

100-110

HCL

PRESERVATIVE

NUMBER OF CONTAINERS

SAMPLE LOG

NAME / ADDRESS:

SAMPLING DATA

ODOR

PURGING DATA

TEST PARAMETERS

1ST QUARTER 2022

WYOMING GALLUP REFINERY

[illegible]

7-10 FEB 68

[illegible]

821.5

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TABLE I

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27/10

82-1191

REPAIRS ON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

2342

Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
--------------------------	----------------------	-----------	----------------	----------------------------	----------

[illegible]

ODOR:

Has Product

NAME / ODOR

SAMPLE LOG

CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
1 LIT VOA	6	HCL
0.5 LIT VOA	2	NA ₂ S ₂ O ₃
0.5 LIT VOA	2	NEAT
0.5 LIT VOA	1	NEAT
500 ML PLASTIC	1	HNO ₃
500 ML PLASTIC	1	HNO ₃
500 ML PLASTIC FILTERED	1	HNO ₃
500 ML PLASTIC	1	NaOH

ER

11

HR Product

TEMPERATURE HON GALLUP REFINERY

[illegible]

ODOR:

SMITH / ODOR

PRESERVATIVE

1 L VOA	6	HCL
0.5 L VOA	2	NA ₂ S ₂ O ₃
1 L R AMBER	2	NEAT
0.5 L AMBER	1	NEAT
500 ML PLASTIC	1	HNO ₃
1 L ML PLASTIC FILTERED	1	HNO ₃
500 ML PLASTIC	1	NaOH

ER

WARRIOR GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

TIME:

HCl

Temperature

Conductivity (mS)

47

(7/8) SCL

Salinity (ppt)

Dissolved Oxygen (mg/L)	
1.0	1.0
2.0	2.0
3.0	3.0
4.0	4.0
5.0	5.0
6.0	6.0
7.0	7.0
8.0	8.0
9.0	9.0
10.0	10.0

ORP (mV)

ODOR:

PLAS Product

ODOR:

SAMPLE LOG

PRESERVATIVE

NUMBER OF CONTAINERS

DEALER TYPE

HCL

9

VOA T-10

$$\text{Na}_2\text{S}_2\text{O}_3$$

2

VOA : 01

NEAT

2

NUMBER

 ε_{ONH}

↓

5010 PLASTIC

 ε_{ONH}

T

125 ML PLASTIC FILTERED

NaOH

7

503 ML PLASTIC

ER

SIGNATURE:

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

1ST QUARTER 2022

2444

HC

221172

Abstract

541-542

33-34.

4. Cl

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NAME / ODOR:

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1775 Product

SAMPLE LOG

ALTER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE

4077

400

MECHANICAL



Journal of Management Education 32(10)

CONTROL

ER

NaOH	1
HNO ₃	1
HNO ₃	1
NEAT	1
NEAT	2
Na ₂ S ₂ O ₃	2

INFORMATION GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

TIME

HỒ

Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)

RE/ODOR:

SUMMARY

NAME / ADDRESS

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DATE: 11-11-58

PRESERVATIVE

VOA 7.1

VOI 100 C

$$\text{Na}_2\text{S}_2\text{O}_3$$

RESEARCH AND ANALYSIS

NEAT

NO. 11 LAMBER

NEAT

3017 PLASTIC

 ε_{ONH}

25 ML PLASTIC FILTERED

 ε_{ONH}

FOUO EPLASTIC

 NaOH

INTERVIEW

44

SIGNATURE:

MAATHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

TIME

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(F-E)	
(F-L)	
SEITE	
SE	9/15/22
MKT-F-14	

RE/ODOR:

Has Produced

WATER / ODOUR:

SAMPLE LOG

CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
1 LITRA	6	HCL
1 LITRA	2	NA ₂ S ₂ O ₃
1 LITRA	2	NEAT
1 LITRA	1	NEAT
500 ML PLASTIC	1	HNO ₃
100 ML PLASTIC FILTERED	1	HNO ₃
100 ML PLASTIC	1	NaOH

SIGNATURE:

MAHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

Temperature	Degrees C	Conductivity	(mS)	TDS	(g/L)	Salinity	(ppt)	Dissolved	Oxygen (mg/L)	ORP	(mv)

ODOR:

Mrs Product

DATE / TIME

SAMPLE LOG

CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
100 ML PLASTIC	1	NaOH
100 ML PLASTIC FILTERED	1	HNO ₃
50 ML PLASTIC	1	HNO ₃
50 ML AMBER	1	NEAT
50 ML AMBER	2	NEAT
50 ML VOA	2	Na ₂ S ₂ O ₃
50 ML VOA	6	HCL

Released to Imaging: 8/14/2026 5:09:31 PM

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

TIME	PH	Temperature Degrees C	Conductivity (ms)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
1:10	7.41	17.6	0.70	455.00	0.34	1.17	13.6
1:15	7.40	17.3	0.71	450.50	0.34	1.18	13.1
1:19	7.40	17.1	0.69	430.00	0.35	1.18	12.8

PURGING DATA

CONDITIONS:

Sunny 80°F

EXCHANGE / ODOR:

Brown / No odor

SAMPLING DATA

CONDITIONS:

Sunny 63°F

EXCHANGE / ODOR:

Brown / No odor

SAMPLE LOG

PRESERVATIVE

NUMBER OF CONTAINERS

CONTAINER TYPE

HCL

6

40 ML VOA

NA₂S₂O₃

2

40 ML VOA

NEAT

2

1 LITER AMBER

NEAT

1

800 ML AMBER

HNO₃

1

250 ML PLASTIC

HNO₃

1

125 ML PLASTIC FILTERED

NaOH

1

800 ML PLASTIC

IN VOLUME / SUB - QUANTITY MEIER

SIGNATURE:

FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

PURGING DATA

ODOR:

HHS Product

SAMPLING DATA

WICHTIG: ODOR:

SAMPLE LOG

DIFFER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
1. PLVDA	6	HCL
2. PLVDA	2	NA ₂ S ₂ O ₃
3. RUBBER	2	NEAT
4. RUBBER	1	NEAT
5. RUBBER PLASTIC	1	HNO ₃
6. RUBBER PLASTIC FILTERED	1	HNO ₃
7. RUBBER PLASTIC	1	NaOH

SIGNATURE:

12.93
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MAHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

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3. 2007 年 10 月 1 日起实施

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38

1. *Chlorophyll a* (Chl *a*)

1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 26

CE: AL

$$|A| = \frac{1}{2} \sqrt{2} \sqrt{2} = 1$$

SIMPLE

“THE/ODOR”

~~Not enough Fluid~~

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 103–110

WILSON / ODOR

PRESERVATIVE

REFERENCES

VOA 7.1 VOA

VOA 0

$$\text{Na}_2\text{S}_2\text{O}_3$$

NEAI

NEAL

 ε_{ONH} ϵ_{ONH} NaOH

JOE M. PLASTIC

ENTER

SIGNATURE:

1. 1. MILLER HON GALLUP REFINERY
2. 1. FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

ODOR:

Has Product

~~70000~~

PRESERVATIVE

100 ML PLASTIC	1	NaOH
100 ML PLASTIC FILTERED	1	HNO ₃
100 ML PLASTIC	1	HNO ₃
100 ML PLASTIC	1	NEAT
100 ML PLASTIC	2	NEAT
100 ML PLASTIC	2	Na ₂ S ₂ O ₃
100 ML PLASTIC	6	HCL

REPLY

LEONARD HON GALLUP REFINERY

1ST QUARTER 2022

TIME

HC⁺

Temperature

Conductivity (mS)

TDS (g/L)

Salinity (ppt)

Dissolved
Oxygen (mg/L)

ORP (mV)

[illegible]

DATE / 30

Has Product

~~WOLF / ODORE~~

PRESERVATIVE

NUMBER OF CONTAINERS

CONCLUSION

HCL

9

$$\text{Na}_2\text{S}_2\text{O}_3$$

2

NEAT

2

$$\frac{0.1111}{0.1111}$$

T

UNFI

3000

T

 NaOH

7

MR. JAMES M. HARRIS:

1.2.2.2. HON GALLUP REFINERY

1ST QUARTER 2022

TYPE

ORP (mv)	Dissolved Oxygen (mg/L)	Salinity (ppt)	TDS (g/L)	Conductivity (mS)	Temperature Degrees C
----------	-------------------------	----------------	-----------	-------------------	-----------------------

[illegible]

ODOR

1705 Product

~~SECRET~~

PRESERVATIVE

100 ML PLASTIC	1	NaOH
100 ML PLASTIC FILTERED	1	HNO ₃
50 ML PLASTIC	1	HNO ₃
100 ML AMBER	1	NEAT
100 ML AMBER	2	NEAT
100 ML VOA	2	Na ₂ S ₂ O ₃
100 ML VOA	6	HCL

UNITED STATES DEPARTMENT OF JUSTICE

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

TIME	PH	Temperature Degrees C	Conductivity (ms)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
12:35	7.07	17.3	7.86	5109.00	4.37	1.55	180.3
12:39	7.06	17.2	7.85	5090.50	4.36	1.54	179.2
12:43	7.06	17.2	7.85	5037.00	4.35	1.54	179.1

PURGING DATA

CONDITIONS:

WATER CHANGE / ODOR:

Cloudy / 68°F
Clear / Slight HC odor

SAMPLING DATA

WATER CONDITIONS:

WATER CHANGE / ODOR:

Sunny / 55°F
Clear / Slight HC odor

SAMPLE LOG

Dep-9-14-22 collected

CONTAINER TYPE NUMBER OF CONTAINERS PRESERVATIVE

60 ML VOA	6	HCL
40 ML VOA	2	NA ₂ S ₂ O ₃
2 LITER AMBER	2	NEAT
400 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
125 ML PLASTIC FILTERED	1	HNO ₃
300 ML PLASTIC	1	NaOH

QUALITY METER

SIGNATURE:

FIRST QUARTER 2022

Keywords: *Self-esteem; self-worth; self-concept; self-identity*

CONTAINER TYPE

NUMBER OF CONTAINERS
PRESERVATIVE

SAMPLE LOG

100-443887-100

PURGING DATA

W 676-28

TEST PARAMETERS

Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
--------------------------	----------------------	-----------	----------------	----------------------------	----------

ORP (mv)

MIGRAHON GALLUP REFINERY

First Quarter 2022

TIME

Temperature Degrees C	Conductivity (mS)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
--------------------------	----------------------	-----------	----------------	----------------------------	----------

[illegible]

STILL MORE

Smelling / Closeby / 3105
EXCHANGE / ODOR:
Brown / 11c odor

~~Personal~~

NO. 100-100000

Cloudy / 63°F / 10 mph SW winds
Brown / 1/c odor

COMMITTEE TYPE

PRESERVATIVE

500 ML VOA	6	HCL
40 ML VOA	2	NA ₂ S ₂ O ₃
2 LITER AMBER	2	NEAT
500 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
125 ML PLASTIC FILTERED	1	HNO ₃
500 ML PLASTIC	1	NaOH

IN VOLUME 1: GLOBE - JOURNAL OF THE MEIER

SIGNATURE:

Released to Imaging: 8/14/2026 5:09:31 PM

NEARATHON GALLUP REFINERY

FIRST QUARTER 2022

PH	Temperature Degrees C	Conductivity (ms)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
7.18	18.6	2.23	1449.50	1.15	1.87	16.6
7.19	18.1	2.21	1436.50	1.14	1.69	13.3
7.19	18.3	2.21	1436.50	1.14	1.70	11.2

REMARKS: Sunny 83°F
T. E. W. / O. D. R.:

1. CHANGE / ODOOR:

Brown No. 20.

2000

2000

ODOR:

Brown / No Order

NUMBER OF CONTAINERS PRESERVATIVE

PRESERVATIVE

40 ML VOA	6	HCL
40 ML VOA	2	NA ₂ S ₂ O ₃
1 LITER AMBER	2	NEAT
500 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
125 ML PLASTIC FILTERED	1	HNO ₃
500 ML PLASTIC	1	NaOH

IN. OF COME. (3) 1000 IN. METER

SIGNATURE:

Released to Imaging: 8/14/2026 5:09:31 PM

1ST QUARTER 2022

Mrs. Proctor

PURGING DATA

Temperature	Conductivity	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
-------------	--------------	-----------	----------------	-------------------------	----------

23.34
23.38

22516

INFORMATION GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

69-81
99-81
221516
MKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

18.66
18.69
2215/6
18-34
MARKT-34

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

FIRST QUARTER 2022

TEST PARAMETERS

[illegible]

PURGING DATA

SNOLLENOR 1 11

ODOR: 1 EXCHANGE / 100

Product

SAMPLING DATA

[illegible]

ODOR:

TABLE 1. *Summary of the 1997-1998 season*

LEON

FINAL FINDER

(1) $\mathbb{E}(\mathbf{X}) = \mathbf{A}^{-1}$

230

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

FIGURE 1

13. **NOTE:**

73.100

1012

CONCLUSION

240-100

References

1. *Journal of the American Medical Association*, 1997; 278: 1019-1024.

1. $\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx = - \int_{\mathbb{R}^n} |\nabla u|^2 dx \leq 0$

—

136



21

INTEGRATION GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

[illegible]

PURGING DATA

SENOLLY, 1902.

7205

ODOR:

Gray: 21 / with w.h.t. 8.55 / 1060da.

Pargal Bay

SAMPLING DATA

CONCLUSIONS

Sunny / Cloudy / 6/10

ODOR: 0.00

Gangash / with white bags / no odor

SAMPLE LOG

CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
10 ML VOA	6	HCL
40 ML VOA	2	NA ₂ S ₂ O ₃
1 LITER AMBER	2	NEAT
100 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
1.25 ML PLASTIC FILTERED	1	HNO ₃
300 ML PLASTIC	1	NaOH
QUALITY METER		

[illegible]

REFRAHON GALLUP REFINERY

1ST QUARTER 2022

[illegible]

WEEDS:

7/08 Product

ODOR:

PRESERVATIVE

THE TYPE

VOI TIT :

VOA 0

NUMBER

17 JAN 1968

2013/07/10

300 ML PLASTIC

WINTER

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

TIME	pH	Temperature Degrees C	Conductivity (ms)	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
1:45	7.07	16.2	10.44	1786.00	5.93	5.27	35.4
1:50	7.08	16.8	10.36	1734.00	5.88	4.64	27.6
2:05	7.05	16.9	10.29	1688.50	5.84	4.30	35.0
3:05							
4:05							
5:05							
6:05							
7:05							
8:05							
9:05							
10:05							
11:05							
12:05							
13:05							
14:05							
15:05							
16:05							
17:05							
18:05							
19:05							
20:05							
21:05							
22:05							
23:05							
24:05							

PURGING DATA

TEST CONDITIONS:

EXCHANGE / ODOR:

Sample in wind

Clear / No odor

SAMPLING DATA

TEST CONDITIONS:

EXCHANGE / ODOR:

Sample / Cloudy / 610P

Clear / No odor

SAMPLE LOG

CONTAINER TYPE NUMBER OF CONTAINERS PRESERVATIVE

100 ML VOA	6	HCL
100 ML VOA	2	NA ₂ S ₂ O ₃
2 LITER AMBER	2	NEAT
100 ML AMBER	1	NEAT
250 ML PLASTIC	1	HNO ₃
125 ML PLASTIC FILTERED	1	HNO ₃
100 ML PLASTIC	1	NaOH

SIGNATURE:

FIRST QUARTER 2022

Page 253 of 5177

MAHARAJON GALLUP REFINERY
FIRST QUARTER 2022

FIRST QUARTER 2022

Temperature	Conductivity	TDS (g/L)	Salinity (ppt)	Dissolved Oxygen (mg/L)	ORP (mv)
10	100	10	10	10	10
20	200	20	20	20	20
30	300	30	30	30	30
40	400	40	40	40	40
50	500	50	50	50	50
60	600	60	60	60	60
70	700	70	70	70	70
80	800	80	80	80	80
90	900	90	90	90	90
100	1000	100	100	100	100

34

TIME:

24-51911

2/5/22

$$\begin{array}{rcl} \text{---} & \text{---} & \text{---} \\ \text{---} & \text{---} & \text{---} \end{array}$$
[illegible]

1000

[illegible]

ODOR:

317

PURGING DATA

405

SAMPLING DATA

ODOR:

SAMPLE LOG

REF ID	REF TYPE	NUMBER OF CONTAINERS	PRESERVATIVE
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15
16	16	16	16
17	17	17	17
18	18	18	18
19	19	19	19
20	20	20	20
21	21	21	21
22	22	22	22
23	23	23	23
24	24	24	24
25	25	25	25
26	26	26	26
27	27	27	27
28	28	28	28
29	29	29	29
30	30	30	30
31	31	31	31
32	32	32	32
33	33	33	33
34	34	34	34
35	35	35	35
36	36	36	36
37	37	37	37
38	38	38	38
39	39	39	39
40	40	40	40
41	41	41	41
42	42	42	42
43	43	43	43
44	44	44	44
45	45	45	45
46	46	46	46
47	47	47	47
48	48	48	48
49	49	49	49
50	50	50	50
51	51	51	51
52	52	52	52
53	53	53	53
54	54	54	54
55	55	55	55
56	56	56	56
57	57	57	57
58	58	58	58
59	59	59	59
60	60	60	60
61	61	61	61
62	62	62	62
63	63	63	63
64	64	64	64
65	65	65	65
66	66	66	66
67	67	67	67
68	68	68	68
69	69	69	69
70	70	70	70
71	71	71	71
72	72	72	72
73	73	73	73
74	74	74	74
75	75	75	75
76	76	76	76
77	77	77	77
78	78	78	78
79	79	79	79
80	80	80	80
81	81	81	81
82	82	82	82
83	83	83	83
84	84	84	84
85	85	85	85
86	86	86	86
87	87	87	87
88	88	88	88
89	89	89	89
90	90	90	90
91	91	91	91
92	92	92	92
93	93	93	93
94	94	94	94
95	95	95	95
96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

40771

WDA 100

$\Gamma_1 \times \Gamma_2$
 $\Gamma_1 \times \Gamma_2 \times \Gamma_3 \times \Gamma_4 \times \Gamma_5 \times \Gamma_6 \times \Gamma_7 \times \Gamma_8 \times \Gamma_9 \times \Gamma_{10} \times \Gamma_{11} \times \Gamma_{12} \times \Gamma_{13} \times \Gamma_{14} \times \Gamma_{15} \times \Gamma_{16} \times \Gamma_{17} \times \Gamma_{18} \times \Gamma_{19} \times \Gamma_{20} \times \Gamma_{21} \times \Gamma_{22} \times \Gamma_{23} \times \Gamma_{24} \times \Gamma_{25} \times \Gamma_{26} \times \Gamma_{27} \times \Gamma_{28} \times \Gamma_{29} \times \Gamma_{30} \times \Gamma_{31} \times \Gamma_{32} \times \Gamma_{33} \times \Gamma_{34} \times \Gamma_{35} \times \Gamma_{36} \times \Gamma_{37} \times \Gamma_{38} \times \Gamma_{39} \times \Gamma_{40} \times \Gamma_{41} \times \Gamma_{42} \times \Gamma_{43} \times \Gamma_{44} \times \Gamma_{45} \times \Gamma_{46} \times \Gamma_{47} \times \Gamma_{48} \times \Gamma_{49} \times \Gamma_{50} \times \Gamma_{51} \times \Gamma_{52} \times \Gamma_{53} \times \Gamma_{54} \times \Gamma_{55} \times \Gamma_{56} \times \Gamma_{57} \times \Gamma_{58} \times \Gamma_{59} \times \Gamma_{60} \times \Gamma_{61} \times \Gamma_{62} \times \Gamma_{63} \times \Gamma_{64} \times \Gamma_{65} \times \Gamma_{66} \times \Gamma_{67} \times \Gamma_{68} \times \Gamma_{69} \times \Gamma_{70} \times \Gamma_{71} \times \Gamma_{72} \times \Gamma_{73} \times \Gamma_{74} \times \Gamma_{75} \times \Gamma_{76} \times \Gamma_{77} \times \Gamma_{78} \times \Gamma_{79} \times \Gamma_{80} \times \Gamma_{81} \times \Gamma_{82} \times \Gamma_{83} \times \Gamma_{84} \times \Gamma_{85} \times \Gamma_{86} \times \Gamma_{87} \times \Gamma_{88} \times \Gamma_{89} \times \Gamma_{90} \times \Gamma_{91} \times \Gamma_{92} \times \Gamma_{93} \times \Gamma_{94} \times \Gamma_{95} \times \Gamma_{96} \times \Gamma_{97} \times \Gamma_{98} \times \Gamma_{99} \times \Gamma_{100}$

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

Keywords: child sexual abuse; disclosure; self-blame

12 11 10 9 8 7 6 5 4 3 2 1

MANAGEMENT

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

TEST PARAMETERS

8-8
76 10
9-15
VU

2-2-6

MKT-43

'SNO' 11-10-11

51

Sh: 2

29.

2101

[illegible]

70H

NEAT

ΣΟΝΗ

11031

QUALITY METER

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | PH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 10:20 | 8.25 | 16.2 | 1.75 | 1223.50 | 0.88 | 3.26 | 66.5 |
| 10:35 | 8.23 | 16.0 | 1.73 | 1124.50 | 0.87 | 3.25 | 63.5 |
| | | | | | | | |
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PURGING DATA

CONDITIONS:

Cloudy / 77°F 8 mph SW wind
CHANGE / ODOR: Brown / No odor

Purged Only

SAMPLING DATA

CONDITIONS:

Sunny / 64°F
CHANGE / ODOR: Brown / No odor

SAMPLE LOG

CONTAINER TYPE NUMBER OF CONTAINERS PRESERVATIVE

| | | |
|---------------|---|---|
| 0.5 LVOA | 6 | HCL |
| 0.5 LVOA | 2 | NA ₂ S ₂ O ₃ |
| 0.5 LTR AMBER | 2 | NEAT |
| 0.5 LTR AMBER | 1 | NEAT |
| 0.5 LTR AMBER | 1 | HNO ₃ |
| 0.5 LTR AMBER | 1 | HNO ₃ |
| 0.5 LTR AMBER | 1 | HNO ₃ |
| 0.5 LTR AMBER | 1 | NaOH |

QUALITY METER

SIGNATURE:

SAMPLE TIME 10:20

DATE / TIME 3/21/22

SAMPLE DATE 9-27-22

TIME (FEET) 0.00

DEPTH 0.00

DEPTH 2:15

DATE 9-26-22

TIME 7:25

TIME 10:20

TIME 14:18

TIME 51:20

TIME 36:40

TIME 11:4

TIME 9:27:22

TIME 10:20

MARATHON GALLUP REFINERY
FIRST QUARTER 2022

FIRST QUARTER 2022

TEST PARAMETERS

[illegible]

PURGING DATA

References

ODOR:

Das Produkt

SAMPLING DATA

2011年10月10日

ODOR:

SAMPLE LOG

PRESERVATIVE

THE UNIVERSITY OF CHICAGO

9

HCL

$$\text{Na}_2\text{S}_2\text{O}_3$$

2

NEAT

2

NEAT

T

 HNO_3

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1

 NaOH

T

IN VOLUME 18, PAGE 1000, QUANTITY METER

SIGNATURE:

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IMPERIAL HON GALLUP REFINERY

FIRST QUARTER 2022

| pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 6.94 | 16.6 | 147 | 1085.50 | 0.85 | 2.20 | 249.7 |
| 6.91 | 16.5 | 146 | 1079.00 | 0.84 | 2.18 | 240.6 |
| 6.97 | 16.4 | 147 | 1085.50 | 0.85 | 2.14 | 244.5 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

[illegible]

2000

6805

1990 07/14

09/cleady/stor
ANCE/ODOR:
cleady/stor odor

DATE: 10/10/2013

01/01/2010

| NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------------|--------------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |
| 5 | 5 |
| 6 | 6 |
| 7 | 7 |
| 8 | 8 |
| 9 | 9 |
| 10 | 10 |
| 11 | 11 |
| 12 | 12 |
| 13 | 13 |
| 14 | 14 |
| 15 | 15 |
| 16 | 16 |
| 17 | 17 |
| 18 | 18 |
| 19 | 19 |
| 20 | 20 |
| 21 | 21 |
| 22 | 22 |
| 23 | 23 |
| 24 | 24 |
| 25 | 25 |
| 26 | 26 |
| 27 | 27 |
| 28 | 28 |
| 29 | 29 |
| 30 | 30 |
| 31 | 31 |
| 32 | 32 |
| 33 | 33 |
| 34 | 34 |
| 35 | 35 |
| 36 | 36 |
| 37 | 37 |
| 38 | 38 |
| 39 | 39 |
| 40 | 40 |
| 41 | 41 |
| 42 | 42 |
| 43 | 43 |
| 44 | 44 |
| 45 | 45 |
| 46 | 46 |
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| 50 | 50 |
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| 52 | 52 |
| 53 | 53 |
| 54 | 54 |
| 55 | 55 |
| 56 | 56 |
| 57 | 57 |
| 58 | 58 |
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| 82 | 82 |
| 83 | 83 |
| 84 | 84 |
| 85 | 85 |
| 86 | 86 |
| 87 | 87 |
| 88 | 88 |
| 89 | 89 |
| 90 | 90 |
| 91 | 91 |
| 92 | 92 |
| 93 | 93 |
| 94 | 94 |
| 95 | 95 |
| 96 | 96 |
| 97 | 97 |
| 98 | 98 |
| 99 | 99 |
| 100 | 100 |

CONTAINER TYPE

PRESERVATIVE

 $\text{Na}_2\text{S}_2\text{O}_3$

2

NEAT

 $\mathbb{T}$ ϵ_{ONH}

I _____

 NaOH

WINTER

[illegible]

8.30

228-10

22-21-

6

2007

1090

816

3.0

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[illegible]

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

1ST QUARTER 2022

314.

22/5/6
th - 25/5/6

[illegible]

NAME / ODOR:

Has Product

TAJIG / ODOR:

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|--------------------------|----------------------|---|
| 100 ML PLASTIC | 6 | HCL |
| 100 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 100 ML VOA | 2 | NEAT |
| 100 ML AMBER | 2 | NEAT |
| 100 ML AMBER | 1 | NEAT |
| 500 ML PLASTIC | 1 | HNO ₃ |
| 1.25 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |

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1ST QUARTER 2022

DATE _____

| | | | | | | | | |
|-------------|-----------|--------------|------|-----------|----------------|-----------|---------------|----------|
| Temperature | Degrees C | Conductivity | (mS) | TDS (g/L) | Salinity (ppt) | Dissolved | Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |

510

Has Product

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DATE

3. OTHER TYPE

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 500 ML PLASTIC | 1 | NaOH |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 50 ML PLASTIC | 1 | HNO ₃ |
| 50 ML PLASTIC | 1 | NEAT |
| 50 ML PLASTIC | 2 | NEAT |
| 50 ML PLASTIC | 2 | Na ₂ S ₂ O ₃ |
| 50 ML PLASTIC | 6 | HCL |

CONTINUED

SIGNATURE:

UNITER

500 ML PLASTIC

123 ML PLASTIC FILTERED

011574711119

NUMBER

NUMBER

COCA

VOA

NUMBER OF CONTAINERS PRESERVATIVE

SAMPLE LOG

SMELL / ODOR:

SAMPLING DATA

[illegible]

PURGING DATA

[illegible]

TEST PARAMETERS

1ST QUARTER 2022

REFRAN HON GALLUP REFINERY

7 - 101 101

26.5

E. E.

26-41-5000

1990

AS-43W

22/5/16

26-5

42

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FIRST QUARTER 2022

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 15 | 8.36 | 17.4 | 1.43 | 929.50 | 0.72 | 2.49 | 78.5 |
| 19 | 8.35 | 17.1 | 1.45 | 942.50 | 0.72 | 2.35 | 60.5 |
| 23 | 8.35 | 17.0 | 1.46 | 939.00 | 0.72 | 2.40 | 60.3 |

PURGING DATA

10-10-70

NAME / ODOB: 2002 Spring

SAMPLING DATA

ANSWERS:

5/9/02

CLINTON TWP. IND.
DUP-9-27-22 Collect

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------|----------------------|--------------|
| 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
| 10 | 1 | 1 |
| 11 | 1 | 1 |
| 12 | 1 | 1 |
| 13 | 1 | 1 |
| 14 | 1 | 1 |
| 15 | 1 | 1 |
| 16 | 1 | 1 |
| 17 | 1 | 1 |
| 18 | 1 | 1 |
| 19 | 1 | 1 |
| 20 | 1 | 1 |
| 21 | 1 | 1 |
| 22 | 1 | 1 |
| 23 | 1 | 1 |
| 24 | 1 | 1 |
| 25 | 1 | 1 |
| 26 | 1 | 1 |
| 27 | 1 | 1 |
| 28 | 1 | 1 |
| 29 | 1 | 1 |
| 30 | 1 | 1 |
| 31 | 1 | 1 |
| 32 | 1 | 1 |
| 33 | 1 | 1 |
| 34 | 1 | 1 |
| 35 | 1 | 1 |
| 36 | 1 | 1 |
| 37 | 1 | 1 |
| 38 | 1 | 1 |
| 39 | 1 | 1 |
| 40 | 1 | 1 |
| 41 | 1 | 1 |
| 42 | 1 | 1 |
| 43 | 1 | 1 |
| 44 | 1 | 1 |
| 45 | 1 | 1 |
| 46 | 1 | 1 |
| 47 | 1 | 1 |
| 48 | 1 | 1 |
| 49 | 1 | 1 |
| 50 | 1 | 1 |
| 51 | 1 | 1 |
| 52 | 1 | 1 |
| 53 | 1 | 1 |
| 54 | 1 | 1 |
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| 56 | 1 | 1 |
| 57 | 1 | 1 |
| 58 | 1 | 1 |
| 59 | 1 | 1 |
| 60 | 1 | 1 |
| 61 | 1 | 1 |
| 62 | 1 | 1 |
| 63 | 1 | 1 |
| 64 | 1 | 1 |
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| 66 | 1 | 1 |
| 67 | 1 | 1 |
| 68 | 1 | 1 |
| 69 | 1 | 1 |
| 70 | 1 | 1 |
| 71 | 1 | 1 |
| 72 | 1 | 1 |
| 73 | 1 | 1 |
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| 75 | 1 | 1 |
| 76 | 1 | 1 |
| 77 | 1 | 1 |
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| 85 | 1 | 1 |
| 86 | 1 | 1 |
| 87 | 1 | 1 |
| 88 | 1 | 1 |
| 89 | 1 | 1 |
| 90 | 1 | 1 |
| 91 | 1 | 1 |
| 92 | 1 | 1 |
| 93 | 1 | 1 |
| 94 | 1 | 1 |
| 95 | 1 | 1 |
| 96 | 1 | 1 |
| 97 | 1 | 1 |
| 98 | 1 | 1 |
| 99 | 1 | 1 |
| 100 | 1 | 1 |

9

U.S. AIR FORCE

2

MASS²O₃

NEAT 2

NEAT 1

1 HNO₃

[illegible]

1 NaOH

QUALITY METER

SIGNATURE: _____

Released to Imaging: 8/14/2026 5:09:31 PM

~~Cloudy / 990F 9 mph SW~~

SAMPLING DATA

PURGING DATA

| TEST PARAMETERS | | | | | | | TIME |
|-----------------|-------------------------|----------------|-----------|-------------------|-----------------------|------|------|
| ORP (mv) | Dissolved Oxygen (mg/L) | Salinity (ppt) | TDS (g/L) | Conductivity (mS) | Temperature Degrees C | pH | 2:51 |
| 50.5 | 0.40 | 1.96 | 24.50 | 3.70 | 16.0 | 7.72 | 2:54 |
| 43.9 | 0.64 | 1.91 | 2288.50 | 3.62 | 14.5 | 7.66 | 2:57 |
| 0 | 0.52 | 1.71 | 2119.0 | 3.26 | 14.8 | 7.61 | |
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MARATHON GALLUP REFINERY
FIRST QUARTER 2022

| DATE | TIME | LOCATION | REMARKS |
|---------|-------|----------|---------|
| 9-26-70 | 11:00 | | |
| 9-26-70 | 3:00 | | |
| 10-30 | | | |
| 9-21-72 | | | |
| 11-07 | | | |

00-10
9-22
N/A
7-83
6646
5807
1300-4
1300-2

1ST QUARTER 2022

DATE _____

| TEST PARAMETERS | | | | | | | | | |
|---|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|--|
| UNITS | TIME | pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | |
| <div style="display: flex; justify-content: space-between;"> <div> <p>GAUGE DATE 4-2-22</p> <p>GAUGE TIME 10:11</p> </div> <div> <p>CHC (FEET) 18.90</p> <p>DTW (FEET) 64</p> <p>DTB - D/W</p> <p>CAPACITY PER FOOT 0.003 - 4"</p> <p>0.138 - 2"</p> </div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <p>WEATHER CONDITIONS:</p> <p>WATER APPEARANCE / ODOR:</p> <p>COMMENTS: Has Product</p> </div> <div> <p>3 WELL VOLUMES</p> <p>PURGE DATE</p> <p>END OF PURGE TIME</p> <p>PURGE AMOUNT</p> <p>DTW (FEET)</p> </div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <p>SAMPLING DATA</p> <p>WEATHER CONDITIONS:</p> <p>WATER APPEARANCE / ODOR:</p> <p>COMMENTS:</p> </div> <div> <p>SAMPLE DATE</p> <p>DTW (FEET)</p> <p>SAMPLE TIME</p> </div> </div> | | | | | | | | | |
| <div style="display: flex; justify-content: space-between;"> <div> <p>SAMPLE LOG</p> <p>NUMBER OF CONTAINERS</p> <p>CONTAINER TYPE</p> <p>40 ML VOA</p> <p>40 ML VOA</p> <p>2</p> <p>NEAT</p> <p>2</p> <p>NEAT</p> <p>1</p> <p>800 ML AMBER</p> <p>1</p> <p>250 ML PLASTIC</p> <p>1</p> <p>125 ML PLASTIC FILTERED</p> <p>1</p> <p>500 ML PLASTIC</p> <p>1</p> <p>WATER QUALITY METER</p> </div> <div> <p>SAMPLE ID</p> <p>PREPERSATIVE</p> <p>HCL</p> <p>NA₂S₂O₃</p> <p>NEAT</p> <p>NEAT</p> <p>1</p> <p>HNO₃</p> <p>1</p> <p>HNO₃</p> <p>1</p> <p>NaOH</p> </div> </div> | | | | | | | | | |

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 2:07 | 7.34 | 15.7 | 3.57 | 2320.00 | 1.89 | 0.97 | -58.7 |
| 2:11 | 7.32 | 15.8 | 3.56 | 2314.00 | 1.88 | 0.95 | -58.8 |
| 2:14 | 7.27 | 16.1 | 3.57 | 2127.50 | 1.89 | 0.88 | -57.5 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

PURGING DATA

| | |
|---------------------|------------------------|
| CONDITIONS: | Cloudy |
| TEMPERATURE / ODOR: | 68°F / 14 mph SW winds |
| TIME: | Clear / No odor |

SAMPLING DATA

| | |
|---------------------|-----------------|
| CONDITIONS: | Sunny, 63°F |
| TEMPERATURE / ODOR: | Clear / No odor |
| TIME: | |

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 10 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 500 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |

SIGNATURE:

| | |
|-----------|------------|
| DATE | 09-12-21 |
| TIME | 9:20 |
| LOCATION | CLD (FEED) |
| PARAMETER | 26.02 |
| UNIT | 33.20 |
| TESTER | 07.18 |
| ANALYST | 07.18 |
| REVIEWER | 07.18 |
| APPROVER | 07.18 |
| DATE | 9-14-22 |
| TIME | 3:5 |
| LOCATION | CLD (FEED) |
| PARAMETER | 21.15 |
| UNIT | 3.5 |
| TESTER | 30.78 |
| ANALYST | 30.78 |
| REVIEWER | 30.78 |
| APPROVER | 30.78 |
| DATE | 9-15-22 |
| TIME | 2:15 |
| LOCATION | CLD (FEED) |
| PARAMETER | 29.95 |
| UNIT | 9:30 |
| TESTER | 9:30 |
| ANALYST | 9:30 |
| REVIEWER | 9:30 |
| APPROVER | 9:30 |

FIRST QUARTER 2022

[illegible]

SAMPLING DATA

| WELL COLUMNS | URGENT DATE | END OF URGENT TIME | URGENT AMOUNT | WTW (FEET) |
|--|-------------|--------------------|---------------|------------|
| 156.50 | 9-6-22 | 12:35 | 156.50 | 24.83 |
| WEATHER CONDITIONS: Sunny 8:0P 6 mph SE winds
WATER APPEARANCE / ODOR: Clear / no odor
COMMENTS: | | | | |
| SAMPLING DATA | | | | |
| WEATHER CONDITIONS: Sunny 8:0P 5 mph SE winds
WATER APPEARANCE / ODOR: Clear / no odor
COMMENTS: | | | | |
| SAMPLE DATE 9-7-22
DTM (FEET) 21.90
SAMPLE TIME 11:15 | | | | |

SAMPLE LOG

| PRESERVATIVE | | NUMBER OF CONTAINERS | | CONTAINER TYPE | | SAMPLE ID |
|---|---|----------------------|---|-------------------------|---|-----------|
| HCL | 6 | 40 ML VOA | 1 | 1 LITER AMBER | 1 | |
| NA ₂ S ₂ O ₃ | 2 | 40 ML VOA | 2 | 500 ML AMBER | 2 | |
| NEAT | 2 | | 1 | 250 ML PLASTIC | 1 | |
| NEAT | 1 | | 1 | 125 ML PLASTIC FILTERED | 1 | |
| NaOH | 1 | 500 ML PLASTIC | 1 | | 1 | |

WATER QUALITY METER

INSTRUMENTS USED

SIGNATURE:

CONFIDENTIAL

PARAGON GALLUP REFINERY
FIRST QUARTER 2022

FIRST QUARTER 2022

[illegible]

DOR: Sunny
 Clear / No odor

OFFICE / ODOR:

68°F
ODOR: clear / no odor

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 100 ML PLASTIC | 1 | NaOH |
| 100 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | HNO ₃ |
| 100 ML AMBER | 1 | NEAT |
| 100 ML AMBER | 2 | NEAT |
| 100 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| 100 ML VOA | 6 | HCL |

05, 8
24.70
9/30
24.93
44
4:30
9/24
44
22.55
47.30
24.75
NA
22/5/22

First Quarter 2022

| TEST PARAMETERS | | | | | | | | | |
|-----------------|------------|-------|-----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| WELL ID | DATE | TIME | pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| 02-29 | 9-3-22 | 10:00 | 7.1 | 15.5 | 130 | 1165.00 | 6.66 | 0.52 | -27 |
| Gauge Date | 9-3-22 | | | | | | | | |
| Gauge Time | | | | | | | | | |
| CHC (FEET) | NA | | | | | | | | |
| DTW (FEET) | 18.55 | | | | | | | | |
| DTB-DTW | 32.90 | | | | | | | | |
| COMPACT PER | 0.603 - 4" | | | | | | | | |
| FOOT | 0.138 - 2" | | | | | | | | |

| PURGING DATA | | | | | | | | | |
|-------------------------------------|--|--|--|--|--|--|--|--|--|
| WEATHER CONDITIONS: | | | | | | | | | |
| Sunny 88°F 12 mph S winds | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| Clear / No odor | | | | | | | | | |
| COMMENTS: | | | | | | | | | |
| Purged Dry 2 mph S winds | | | | | | | | | |
| SURGE DATE | | | | | | | | | |
| 9-6-22 | | | | | | | | | |
| END OF SURGE TIME | | | | | | | | | |
| 2:10 | | | | | | | | | |
| SURGE AMOUNT | | | | | | | | | |
| 23.00 | | | | | | | | | |
| DTW (FEET) | | | | | | | | | |
| DRY | | | | | | | | | |

| SAMPLING DATA | | | | | | | | | |
|-------------------------------------|--|--|--|--|--|--|--|--|--|
| WEATHER CONDITIONS: | | | | | | | | | |
| Sunny 88°F 12 mph S winds | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| Clear / No odor | | | | | | | | | |
| COMMENTS: | | | | | | | | | |
| Purged Dry 2 mph S winds | | | | | | | | | |
| SURGE DATE | | | | | | | | | |
| 9-6-22 | | | | | | | | | |
| END OF SURGE TIME | | | | | | | | | |
| 2:10 | | | | | | | | | |
| SURGE AMOUNT | | | | | | | | | |
| 23.00 | | | | | | | | | |
| DTW (FEET) | | | | | | | | | |
| DRY | | | | | | | | | |

| SAMPLE LOG | | | | | | | | | |
|-------------------------|--|--|--|--|--|--|--|--|--|
| PRESERVATIVE | | | | | | | | | |
| HCL | | | | | | | | | |
| 40 ML VOA | | | | | | | | | |
| 6 | | | | | | | | | |
| 40 ML VOA | | | | | | | | | |
| 2 | | | | | | | | | |
| NEAT | | | | | | | | | |
| 2 | | | | | | | | | |
| NEAT | | | | | | | | | |
| 1 LITER AMBER | | | | | | | | | |
| 1 | | | | | | | | | |
| 800 ML AMBER | | | | | | | | | |
| 1 | | | | | | | | | |
| 250 ML PLASTIC | | | | | | | | | |
| 1 | | | | | | | | | |
| 125 ML PLASTIC FILTERED | | | | | | | | | |
| 1 | | | | | | | | | |
| 500 ML PLASTIC | | | | | | | | | |
| 1 | | | | | | | | | |
| WATER QUALITY METER | | | | | | | | | |
| INSTRUMENTS USED | | | | | | | | | |

MARATHON GALLUP REFINERY

1ST QUARTER 2022

| Temperature | Degrees C | Conductivity | (mS) | TDS | (g/L) | Salinity | (ppt) | Dissolved | Oxygen | (mg/L) | ORP | (mv) |
|-------------|-----------|--------------|---------|------|-------|----------|-------|-----------|--------|--------|-----|------|
| 2 | 13.2 | 1.81 | 1166.08 | 0.87 | 2.03 | -20.3 | | | | | | |
| 2 | 13.1 | 1.86 | 1163.36 | 0.86 | 1.93 | -20.1 | | | | | | |
| 1 | 13.1 | 1.78 | 1168.08 | 0.86 | 1.90 | -20.0 | | | | | | |

Smelling: Clear/No odor

ODOR

Clear / No Gds

ODOR: Sunny
Clear / No odor

| PE | NUMBER OF CONTAINERS | PRESERVATIVE |
|---------------|----------------------|---|
| ER | 6 | HCL |
| ER | 2 | NA ₂ S ₂ O ₃ |
| ER | 2 | NEAT |
| ER | 1 | NEAT |
| CTIC | 1 | HNO ₃ |
| CTIC FILTERED | 1 | HNO ₃ |
| CTIC | 1 | NaOH |
| ER | | |

Sib 741 = 1837

02/16 1803 403

00 57 Dec 1945

NS

5:30 PM

2016

1505

$\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{4}$

100% 100% 100%

65-12746-1

40-05

2250

[illegible]

Q-114

MARATHON GALLUP REFINERY
FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------------|----------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 02-50 | 8-2-22 | 11:03 | 8.57 | 14.1 | 1.03 | 669.50 | 0.51 | 0.97 | 170.3 |
| GAUGE TIME | 11:06 | 8.52 | 14.2 | 1.01 | 656.50 | 0.50 | 0.70 | 156.9 | |
| DHO (FEET) | 11:10 | 8.42 | 13.8 | 1.01 | 656.50 | 0.50 | 0.70 | 153.2 | |
| DTW (FEET) | 15.95 | | | | | | | | |
| DIB (FEET) | 65.30 | | | | | | | | |
| DIG-DIV | 47.35 | | | | | | | | |
| ONPAOIN PER | 0.603-4" | | | | | | | | |
| FOOT | 0.155-2" | | | | | | | | |

PURGING DATA

| | | | |
|------------|--------|--------------------------|---------------------------|
| GAUGE DATE | 9-1-22 | WEATHER CONDITIONS: | Sunny 79°F 5 mph winds SE |
| VOLUMES | 23 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF | 11:10 | COMMENTS: | |
| PURGE TIME | | | |
| PURGE | | | |
| AMOUNT | 23 | | |
| DTW (FEET) | 16.30 | | |

SAMPLING DATA

| | |
|--------------------------|--------------------------|
| WEATHER CONDITIONS: | Sunny 66°F 3 mph E winds |
| WATER APPEARANCE / ODOR: | Clear / No odor |
| COMMENTS: | |
| SAMPLE TIME | 8:30 |

SAMPLE LOG

| | | | |
|----------------------|-------------------------|---|---|
| CONTAINER TYPE | 40 ML VOA | 6 | HCL |
| NUMBER OF CONTAINERS | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| PRESERVATIVE | NEAT | 2 | NEAT |
| | 1 LITER AMBER | 1 | NEAT |
| | 500 ML AMBER | 1 | HNO ₃ |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | NaOH |
| | 500 ML PLASTIC | 1 | |
| INSTRUMENTS USED | WATER QUALITY METER | | |

SIGNATURE: _____

CONF. ETD 17

FIRST QUARTER 2022

CONFIDENTIAL

[illegible]

FIRST QUARTER 2022

[illegible]

| WELL | VOLUMES | PURGE DATE | END OF | PURGE TIME | PURGE | AMOUNT | WTW (FEET) |
|------|---------|------------|--------|------------|-------|--------|------------|
| 3 | | | | | | | |
| 2 | | | | | | | |
| 1 | | | | | | | |

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS: DRY

SAMPLING DATA

[illegible]

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 40 NL VOA | 6 | HCL |
| 40 NL VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 500 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |

WATER QUALITY METER

INSTRUMENTS USED

SAMPLE NO.

SIGNATURE:

DECEMBER 1966

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------------|------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 02-54 | 9-7-22 | 2:33 | 6.96 | 14.1 | 1.64 | 1046.00 | 0.83 | 1.43 | -76.5 |
| GAUGE TIME | | 2:36 | 7.06 | 13.1 | 1.61 | 1040.00 | 0.81 | 1.37 | -81.3 |
| CHC (FEET) | NA | 2:39 | 7.08 | 13.6 | 1.58 | 1027.00 | 0.80 | 0.90 | -87.5 |
| DTW (FEET) | 19.04 | | | | | | | | |
| D18 (FEET) | 29.75 | | | | | | | | |
| D10-D11 | 10.71 | | | | | | | | |
| CHPAON/FER | 0.603 - 4" | | | | | | | | |
| FOOT | 0.158 - 2" | | | | | | | | |

PURGING DATA

| | | | | | | | |
|-------------------|--------|---------------------|---------------------------|--------------------------|-----------------|-----------|--|
| WELL VOLUMES | 5.25 | WEATHER CONDITIONS: | Sunny 88°F 13 mph S winds | WATER APPEARANCE / ODOR: | Clear / No odor | COMMENTS: | |
| CHARGE DATE | 9-6-22 | | | | | | |
| END OF PURGE TIME | 2:40 | | | | | | |
| PURGE AMOUNT | 5.25 | | | | | | |
| DTW (FEET) | 19.11 | | | | | | |

SAMPLING DATA

| | | | | | |
|---------------------|---------------------------|--------------------------|-----------------|-----------|--|
| WEATHER CONDITIONS: | Sunny 77°F 2 mph SE winds | WATER APPEARANCE / ODOR: | Clear / No odor | COMMENTS: | |
| SAMPLE DATE | 9-7-22 | | | | |
| DTW (FEET) | 19.09 | | | | |
| SAMPLE TIME | 10:35 | | | | |

SAMPLE LOG

| | | | | |
|------------------|-------------------------|---|---|--------------|
| CONTAINER TYPE | 40 ML VOA | 6 | HCL | PREPERSATIVE |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | |
| | 1 LITER AMBER | 2 | NEAT | |
| | 500 ML AMBER | 1 | NEAT | |
| | 250 ML PLASTIC | 1 | HNO ₃ | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | |
| | 500 ML PLASTIC | 1 | NaOH | |
| INSTRUMENTS USED | WATER QUALITY METER | | | |

SIGNATURE:

CONF. ECHO BY:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|---------------|--------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 02-55 | 9-7-22 | 3:25 | 6.95 | 16.3 | 1.65 | 1072.50 | 0.84 | 0.96 | -75.3 |
| GAUGE TIME | | | | | | | | | |
| DHC (FEET) | | | | | | | | | |
| DHW (FEET) | | | | | | | | | |
| DIB (FEET) | | | | | | | | | |
| DIG - D/H | | | | | | | | | |
| CAPACIT. FEET | | | | | | | | | |
| FOOT | | | | | | | | | |

PURGING DATA

| | | | | | |
|--------------------------|------------|----------------|------|-----|------|
| WELL VOLUME | 5.5 | 9-0-22 | 3:35 | 5.5 | 9.25 |
| WEATHER CONDITIONS: | Sunny 88°F | 60 mph S winds | | | |
| WATER APPEARANCE / ODOR: | | | | | |
| COMMENTS: | | | | | |
| END OF PURGE TIME | | | | | |
| PURGE VOLUME | | | | | |
| PURGE TIME | | | | | |
| PURGE | | | | | |
| DEPTH (FEET) | | | | | |

SAMPLING DATA

| | | | | | |
|--------------------------|------------|----------------|--|--|--|
| WEATHER CONDITIONS: | Sunny 86°F | 5 mph winds SE | | | |
| WATER APPEARANCE / ODOR: | | | | | |
| COMMENTS: | | | | | |
| DEPTH (FEET) | | | | | |
| SAMPLE TIME | 11:20 | | | | |

SAMPLE LOG

| | | | | |
|------------------|-------------------------|---|---|--|
| CONTAINER TYPE | 40 ML VOA | 6 | HCL | |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | |
| | 1 LITER AMBER | 2 | NEAT | |
| | 500 ML AMBER | 1 | NEAT | |
| | 250 ML PLASTIC | 1 | HNO ₃ | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | |
| | 500 ML PLASTIC | 1 | NaOH | |
| INSTRUMENTS USED | WATER QUALITY METER | | | |

SIGNATURE:

DATE: 9/7/22

FIRST QUARTER 2022

SIGNATURE:

CONFIDENTIAL

[illegible]

SIGNATURE:

TEST PARAMETERS

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

| pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 7.06 | 16.2 | 135 | 87.8 | 0.68 | 0.95 | -89.6 |
| 7.05 | 16.1 | 133 | 87.0 | 0.69 | 0.94 | -83.2 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

PURGING DATA

2011-12-10

ODOR: /

Brown / Mc odor / Shizu in bucket

by hand

SAMPLING DATA

"SNOODING ON"

Shining
6405

OFFICE / WORK:

18 Nov / Hc add - / Shcen in samples

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------|----------------------|--------------|
| 1 | 1 | 1 |
| 2 | 2 | 2 |
| 3 | 3 | 3 |
| 4 | 4 | 4 |
| 5 | 5 | 5 |
| 6 | 6 | 6 |
| 7 | 7 | 7 |
| 8 | 8 | 8 |
| 9 | 9 | 9 |
| 10 | 10 | 10 |
| 11 | 11 | 11 |
| 12 | 12 | 12 |
| 13 | 13 | 13 |
| 14 | 14 | 14 |
| 15 | 15 | 15 |
| 16 | 16 | 16 |
| 17 | 17 | 17 |
| 18 | 18 | 18 |
| 19 | 19 | 19 |
| 20 | 20 | 20 |
| 21 | 21 | 21 |
| 22 | 22 | 22 |
| 23 | 23 | 23 |
| 24 | 24 | 24 |
| 25 | 25 | 25 |
| 26 | 26 | 26 |
| 27 | 27 | 27 |
| 28 | 28 | 28 |
| 29 | 29 | 29 |
| 30 | 30 | 30 |
| 31 | 31 | 31 |
| 32 | 32 | 32 |
| 33 | 33 | 33 |
| 34 | 34 | 34 |
| 35 | 35 | 35 |
| 36 | 36 | 36 |
| 37 | 37 | 37 |
| 38 | 38 | 38 |
| 39 | 39 | 39 |
| 40 | 40 | 40 |
| 41 | 41 | 41 |
| 42 | 42 | 42 |
| 43 | 43 | 43 |
| 44 | 44 | 44 |
| 45 | 45 | 45 |
| 46 | 46 | 46 |
| 47 | 47 | 47 |
| 48 | 48 | 48 |
| 49 | 49 | 49 |
| 50 | 50 | 50 |
| 51 | 51 | 51 |
| 52 | 52 | 52 |
| 53 | 53 | 53 |
| 54 | 54 | 54 |
| 55 | 55 | 55 |
| 56 | 56 | 56 |
| 57 | 57 | 57 |
| 58 | 58 | 58 |
| 59 | 59 | 59 |
| 60 | 60 | 60 |
| 61 | 61 | 61 |
| 62 | 62 | 62 |
| 63 | 63 | 63 |
| 64 | 64 | 64 |
| 65 | 65 | 65 |
| 66 | 66 | 66 |
| 67 | 67 | 67 |
| 68 | 68 | 68 |
| 69 | 69 | 69 |
| 70 | 70 | 70 |
| 71 | 71 | 71 |
| 72 | 72 | 72 |
| 73 | 73 | 73 |
| 74 | 74 | 74 |
| 75 | 75 | 75 |
| 76 | 76 | 76 |
| 77 | 77 | 77 |
| 78 | 78 | 78 |
| 79 | 79 | 79 |
| 80 | 80 | 80 |
| 81 | 81 | 81 |
| 82 | 82 | 82 |
| 83 | 83 | 83 |
| 84 | 84 | 84 |
| 85 | 85 | 85 |
| 86 | 86 | 86 |
| 87 | 87 | 87 |
| 88 | 88 | 88 |
| 89 | 89 | 89 |
| 90 | 90 | 90 |
| 91 | 91 | 91 |
| 92 | 92 | 92 |
| 93 | 93 | 93 |
| 94 | 94 | 94 |
| 95 | 95 | 95 |
| 96 | 96 | 96 |
| 97 | 97 | 97 |
| 98 | 98 | 98 |
| 99 | 99 | 99 |
| 100 | 100 | 100 |

HCL

$$\text{Na}_2\text{S}_2\text{O}_3$$

NEAT

NEAT

 ε_{NH} ϵ_{ONH}

NaOH

U. M. E. R.

Q. : ENNE : N

529

2-5-5

3.15

Wish



2.1

11. $\frac{1}{2}$ 12. $\frac{1}{3}$

592

66

72.2

45-30000

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 11:25 | 6.80 | 17.2 | 1.70 | 1105.00 | 0.87 | 1.44 | 94.9 |
| 11:30 | 6.79 | 15.9 | 1.73 | 1124.50 | 0.88 | 1.45 | 82.3 |
| 11:35 | 6.81 | 16.0 | 1.69 | 1098.50 | 0.86 | 1.56 | 81.8 |
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PURGING DATA

CONDITIONS:

Summary 720F

ODOR: CLEAR/NO odor

Clear/NO odor

SAMPLING DATA

CONDITIONS:

clearly 730F Temp. 5

ODOR: CLEAR/NO odor

SAMPLE LOG

CONTAINER TYPE NUMBER OF CONTAINERS PRESERVATIVE

40 ML VOA 6 HCL

40 ML VOA

2 NA₂S₂O₃

2 LITER AMBER 2 NEAT

500 ML AMBER 1 NEAT

250 ML PLASTIC 1 HNO₃

425 ML PLASTIC FILTERED 1 HNO₃

500 ML PLASTIC 1 NaOH

400 ML PLASTIC

SIGNATURE:

00-58

CHANGE DATE

9-2-27

PURGE TIME

N4

CHD (FEEL)

25.85

CHD (FEEL)

47.47

CHD (FEEL)

21.62

CHD (FEEL)

11:35

CHD (FEEL)

16.95

CHD (FEEL)

26.38

CHD (FEEL)

9-19-27

CHD (FEEL)

11:35

CHD (FEEL)

26.38

CHD (FEEL)

9-20-27

CHD (FEEL)

26.38

CHD (FEEL)

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CHD (FEEL)

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CHD (FEEL)

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CHD (FEEL)

26.38

CHD (FEEL)

26.38

FIRST QUARTER 2022

[illegible]

| TEST PARAMETERS | | | | | | | |
|-----------------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| TIME | PH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| 10:45 | 7.68 | 16.2 | 2.08 | 1352.0 | 1.07 | 0.64 | -75.1 |
| | 7.10 | 16.3 | 2.09 | 1330.0 | 1.07 | 0.65 | -75.7 |
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1ST QUARTER 2022

| Temperature | Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------------|-----------|----------------------|-----------|----------------|----------------------------|----------|
| 15.8 | 16.51 | 74981.00 | 6.89 | 2.47 | 160.9 | |
| 14.5 | 11.31 | 73551.50 | 6.47 | 2.48 | 141.9 | |
| 14.9 | 11.38 | 7379.00 | 6.51 | 2.78 | 122.8 | |

TEST PARAMETERS

PURGING DATA

ODOR: 25

204

From No 06

SAMPLING DATA

ODOR:

4972

Trung

1700

SAMPLE LOG

PRESERVATIVE

NUMBER OF CONTAINERS

TYPE

$$\text{Na}_2\text{S}_2\text{O}_3$$

2

100.000

NEAT

2

NUMBER

NEAT

٧

ORIGINAL NUMBER

$$\frac{\text{ONH}}{\varepsilon_{\text{ONH}}}$$

T

50 ML PLASTIC

ORIGINAL PLASTIC FILTERED

ΣΟΝΗ

T

COAL PLASTIC

T

OF T. MEIER

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 11:55 | 7.19 | 15.9 | 5.33 | 373.00 | 3.13 | 4.33 | 26.9 |
| 12:05 | 7.05 | 16.0 | 6.83 | 378.50 | 3.18 | 4.91 | 24.2 |
| | | | | | | | |
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PURGING DATA

CONDITIONS:

Sunny 390F 5 mph NW
ODOR: Brown/muddy / no odor

Purged On

SAMPLING DATA

CONDITIONS:

Sunny 390F 7 mph S
ODOR: Brown / no odor

Flow / No odor

SAMPLE LOG

NUMBER OF CONTAINERS PRESERVATIVE

CONTAINER TYPE

HCL

6

40 ML VOA

NA₂S₂O₃

2

40 ML VOA

NEAT

2

1 LITER AMBER

NEAT

1

500 ML AMBER

HNO₃

1

500 ML PLASTIC

HNO₃

1

125 ML PLASTIC FILTERED

NaOH

1

500 ML PLASTIC

100 ML VOA

SIGNATURE:

OW-60
9-2-22
11:55
7.19
15.9
5.33
373.00
3.13
4.33
26.9
12:05
7.05
16.0
6.83
378.50
3.18
4.91
24.2
14.50
9-19-22
2:05
8.00
Only

MAKING HON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

TIME

HC

Temperature
Degrees C

Conductivity (mS)

(7/8) SCL

Salinity (ppt)

DISSOLVED
Oxygen (mg/l)

ORP (mV)

[illegible]

ODOR: 12:1

1000

DOI: 10.1002/for

2300

73:

31. 031

JRC

1000

$\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{4}$

(= = , SAK)

[illegible]

~~SECRET~~

© 2000 Blackwell Science Ltd

PRESERVATIVE

NUMBER OF CONTAINERS

DIFFER TYPE

72H

9

$$\text{Na}_2\text{S}_2\text{O}_3$$

7

NEAI

7

NEAI

T.

 ε_{NH}

T.

 ε_{ONH}

T

NaOH

T

00 MIL PLASTIC

Y. N. I. ER

SIGNATURE:

INTER

500 ML. PLASTIC

2.3 ML PLASTIC FILTERED

PLASTIC

NUMBER

MEMBER

VOF - C

707 T. 1

2. JETTER TYPE

NUMBER OF CONTAINERS PRESERVATIVE

SAMPLE LOG

~~SECRET~~

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SAMPLING DATA

RE: ODOR

525

PURGING DATA

TEST PARAMETERS

1ST QUARTER 2022

REFRAHON GALLUP REFINERY

23.72
211.13
9/2/22
2

Released to Imaging: 8/14/2026 5:09:31 PM

1. *Phragmites* (common)

ISRAELI HON GALLUP REFINERY

Figure 1 is a schematic representation of the experimental design. It shows a sequence of events: 'Stimulus presentation' (with 'Stimulus duration' indicated), followed by 'Response', 'Response time', and 'Response accuracy'. A feedback loop labeled 'Feedback' connects the 'Response' back to the 'Stimulus presentation' stage.

MARATHON GALLUP REFINERY
FIRST QUARTER 2022

Released to Imaging: 8/14/2026 5:09:31 PM

REFRACTION GALLUP REFINERY

1ST QUARTER 2022

| | | | | | |
|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | |

ODOR: 13

1995 Product

NAME / ODOR:

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|--------------------------|----------------------|---|
| 1 LIT. VOA | 6 | HCL |
| 10 LIT. VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LIT. AMBER | 2 | NEAT |
| 10 LIT. AMBER | 1 | NEAT |
| 10 LIT. PLASTIC | 1 | HNO ₃ |
| 10 LIT. PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML. PLASTIC | 1 | NAOH |

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | Gauge Date | Gauge Time | DHC (FEET) | DTW (FEET) | DIB (FEET) | DDB-DIV | CAPACITOR | FOOT |
|---------|------------|------------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 200-66 | 9-7-22 | | NA | 18.81 | 27.75 | 8.94 | 0.858-4" | 0.158-2" |
| UNITS | TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| 1 | 2:57 | 6.94 | 15.4 | 2.18 | 1417.00 | 1.12 | 1.32 | -88.3 |
| 2 | 3:00 | 6.99 | 15.1 | 2.16 | 1404.00 | 1.11 | 1.14 | -97.4 |
| 3 | 3:05 | 6.97 | 14.4 | 2.17 | 1410.00 | 1.12 | @ .91 | -96.1 |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |

PURGING DATA

| 3 WELL VOLUMES | WELL DATE | END OF PURGE TIME | PURGE AMOUNT | DTW (FEET) |
|---------------------|--|-------------------|--------------|------------|
| 9.50 | 9-6-22 | 3:05 | 4.50 | 19.05 |
| WEATHER CONDITIONS: | WATER APPEARANCE / ODOR: | COMMENTS: | | |
| Sunny 88°F | Clear / Slight HC odor / Sheen in bucket | | | |
| 10 mph S winds | | | | |

SAMPLING DATA

| WEATHER CONDITIONS: | WATER APPEARANCE / ODOR: | COMMENTS: |
|---------------------|---|-------------|
| Sunny 79°F | Clear / Slight HC odor / Sheen in Samples | |
| SAMPLE DATE | DTW (FEET) | SAMPLE TIME |
| 9-7-22 | | 11:00 |

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 40 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 500 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |
| INSTRUMENTS USED | | |
| WATER QUALITY METER | | |

SIGNATURE:

COMPL. END OF:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 2:17 | 6.65 | 14.8 | 12.60 | 8190.00 | 7.27 | 2.54 | -66.3 |
| 13:20 | 6.74 | 14.2 | 12.63 | 8216.00 | 7.29 | 1.82 | -69.7 |
| 2:23 | 6.84 | 13.5 | 12.61 | 8196.50 | 7.27 | 0.92 | -76.5 |
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PURGING DATA

CONDITIONS:

Sunny 80°F 5 mph SW wind

APPEARANCE / ODOR:

Brown / slight odor

URGENT DATE

9-19-22

URGENT TIME

4:45

URGENT NAME

2:25

URGENT

4:45

URGENT

16:00

SAMPLE DATE

9-26-27

URGENT

14:18

URGENT TIME

12:10

CONDITIONS:

Sunny Cloudy / 34°F

APPEARANCE / ODOR:

Brown / slight odor

SAMPLING DATA

SAMPLE LOG

NUMBER OF CONTAINERS PRESERVATIVE

CONTAINER TYPE

HCL

6

40 ML VOA

2

NA₂S₂O₃

2

2 LITER AMBER

2

NEAT

400 ML AMBER

1

NEAT

250 ML PLASTIC

1

HNO₃

125 ML PLASTIC FILTERED

1

HNO₃

300 ML PLASTIC

1

NaOH

QUARTZ MEIER

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 2:35 | 8.13 | 15.8 | 1.12 | 728.00 | 0.56 | 0.87 | 163.5 |
| 2:40 | 8.12 | 15.8 | 1.10 | 718.50 | 0.55 | 0.84 | 158.8 |
| 2:45 | 8.11 | 16.0 | 1.12 | 718.00 | 0.56 | 0.87 | 158.5 |
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PURGING DATA

| | | |
|----------------------|--------------------|-----------------|
| CONDITIONS: | Cloudy / 68°F | 14 mph SW winds |
| WATER CHANGE / ODOR: | Brownish / No odor | |
| END OF | | |
| FORGOTTEN | | |
| URGENT | | |
| WATER | | |

SAMPLING DATA

| | | |
|----------------------|--------------------|--|
| CONDITIONS: | Sunny 63°F | |
| WATER CHANGE / ODOR: | Brownish / No odor | |
| END OF | | |
| FORGOTTEN | | |
| URGENT | | |
| WATER | | |

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 40 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 500 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |

QUA N MEIER

SIGNATURE:

02-70
9-14-22
7.5
9-14-22
2:45
7.5
34.07
9-15-22
32.36
9.55

LABORATION GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 11.50 | 14.1 | 1.13 | 70.50 | 0.56 | 2.09 | -1.1 |
| 11.54 | 13.8 | 1.12 | 78.00 | 0.56 | 2.02 | 2.4 |
| 11.59 | 12.1 | 1.02 | 63.00 | 0.51 | 2.07 | 10.5 |
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PURGING DATA

Summy
720F
Clear/No odor

SAMPLING DATA

Summy
560F
Clear/No odor

SAMPLE LOG

Dur-9-29-22

NUMBER OF CONTAINERS
PRESERVATIVE

| | |
|---|---|
| 6 | HCL |
| 2 | NA ₂ S ₂ O ₃ |
| 2 | NEAT |
| 1 | NEAT |
| 1 | 300 ML AMBER |
| 1 | 250 ML PLASTIC |
| 1 | HNO ₃ |
| 1 | 250 ML PLASTIC FILTERED |
| 1 | 300 ML PLASTIC |
| 1 | NaOH |

SIGNATURE:

MW-1
9-27-22
1:50
11.54
11.59
13.8
12.1
11.59
8.35
139.50
132.63
256
2100
9-28-22
256
2100
9-23
8:20

500 ML PLASTIC

$$\underline{\underline{\epsilon_{ONH}}}$$
 ϵ_{ONH}

NEAT

NEAT

$$\text{Na}_2\text{S}_2\text{O}_3$$

HOL

PRESERVATIVE

SAMPLE LOG

ODOR:

5095

SAMPLING DATA

ODOR:

~~Chlorophyll / Zink~~

PURGING DATA

| ORP (mv) | Dissolved Oxygen (mg/L) | Salinity (ppt) | TDS (g/L) | Conductivity (ms) | Temperature Degrees C | pH |
|----------|-------------------------|----------------|-----------|-------------------|-----------------------|------|
| 18.7 | 1.57 | 0.60 | 77.50 | 1.19 | 14.9 | 6.34 |
| 17.2 | 1.66 | 0.51 | 77.00 | 0.66 | 13.6 | 6.24 |
| 19.2 | 1.76 | 0.56 | 78.00 | 1.12 | 13.5 | 6.20 |

TEST PARAMETERS

FIRST QUARTER 2022

WARRATHON GALLUP REFINERY

02:6

517

5-

03-63

02:

107

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422

26

6

737

MAARATHON GALLUP REFINERY
FIRST QUARTER 2022

FIRST QUARTER 2022

TEST PARAMETERS

[illegible]

PURGING DATA

3NDLH 1001

ODOR:

750 02/142/2

WITNESS MY HAND AND SEAL OF OFFICE AT WASHINGTON, D.C., THIS 10TH DAY OF JANUARY, 1967.

/S/

JOHN EDGAR HOOVER
DIRECTOR

MAIL ROOM / TELETYPE UNIT

TELETYPE UNIT / ODOR:

100.000 / 1.000

SAMPLING DATA

2000

SAMPLE LOG

PRESERVATIVE

CONFIDENTIAL

VOA TWO

701110A

2. LITERATURE

000 MIL AMBER

250 ML PLASTIC

125 ML PLASTIC FILTERED

300 ML PLASTIC

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: a control group (n = 10) and an experimental group (n = 10). The control group received a placebo (PLA) and the experimental group received a 10% w/v alginate-chitosan hydrogel (ALG-CHI). The subjects were divided into two groups: a control group (n = 10) and an experimental group (n = 10). The control group received a placebo (PLA) and the experimental group received a 10% w/v alginate-chitosan hydrogel (ALG-CHI). The subjects were divided into two groups: a control group (n = 10) and an experimental group (n = 10). The control group received a placebo (PLA) and the experimental group received a 10% w/v alginate-chitosan hydrogel (ALG-CHI).

SIGNATURE:

MPRAHON GALLUP REFINERY
FIRST QUARTER 2022

TEST PARAMETERS

| TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 4:08 | 9.08 | 13.8 | 1.20 | 78000 | 0.60 | 1.65 | 36.2 |
| 4:11 | 9.09 | 13.6 | 1.14 | 74100 | 0.57 | 1.57 | 37.6 |
| 4:15 | 9.11 | 13.4 | 1.15 | 72350 | 0.58 | 1.57 | 35.8 |
| | | | | | | | |
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PURGING DATA

CONDITIONS:

Summ 730F

TEMPERATURE / ODOR:

Clear / No odor

SAMPLING DATA

CONDITIONS:

Summ 62F

TEMPERATURE / ODOR:

Clear / No odor

SAMPLE LOG

NUMBER OF CONTAINERS
PRESERVATIVE

CONTAINER TYPE

| | |
|---|---|
| 6 | HCL |
| 2 | NA ₂ S ₂ O ₃ |
| 2 | NEAT |
| 1 | 1 LITER AMBER |
| 1 | 800 ML AMBER |
| 1 | 950 ML PLASTIC |
| 1 | 1.25 ML PLASTIC FILTERED |
| 1 | 300 ML PLASTIC |

QUANTITY MILLER

SIGNATURE:

243
4-28-22
4:15
243
100.15
9-28-72
13.13
9-28-72
9-28-72

MC-5
4-28-22
NA
124.39
126.34
128.39
128.39

1ST QUARTER 2022

2000

2407
8625
203

76

22 62-6
H1

1. $\mathbb{Z} \oplus \mathbb{Z} \oplus \mathbb{Z} \oplus \mathbb{Z} \oplus \mathbb{Z}$

22-96-10 DIRECTOR

8917

$$M \perp \perp A \mid Z$$

PRESERVATIVE

1. EB TYPE

VOV - C

0-1 MOA

MEMBER

2. 11. 1963

STYL PLASTIC

PLASTIC FILTERED

ASTIC

1000

02-10-11

2001-2002

Accession No. 2011-01-01

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J. Forecast. 27, 1031–1044 (2008)
DOI: 10.1002/for

[Downloaded from](#) [129.11.24.111](#) on [Sat, 20 May 2017 12:00:00](#)
[All use subject to](#) [https://www.jstor.org/terms](#)

NUMBER

PLASTIC

0-100 ELASTIC FILTERED

AL PLASTIC

CC NUMBER

LETTER NUMBER

VOA "1.0"

$$\tilde{V}(\mathbf{0}) = 0$$

LINE TYPE

NUMBER OF CONTAINERS
PRESERVATIVE

SAMPLE LOG

ODOR:

SAMPLING DATA

PURGING DATA

[illegible]

TEST PARAMETERS

1ST QUARTER 2022

LABORATORY GALLUP REFINERY

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

FIRST QUARTER 2022

[illegible]

CHANGE/ODOR:

:SNOLN:00

AC

SAMPLING DATA

2000

ODOR:

SAMPLE LOG

PRESERVATIVE

CONTAINER TYPE

NUMBER OF CONTAINERS

73

9

$$\text{Na}_2\text{S}_2\text{O}_3$$

7

NEAT

7

NEAT

—

 ε_{ONH}

T

 ε_{ONH}

T

 NaOH

—

300 ML. PLASTIC

JOHN J. MEYER

SIGNATURE:

HARRISON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| | | | | | | |
| 8.80 | 14.6 | 1.34 | 871.00 | 0.67 | 1.38 | 56.7 |
| 8.77 | 14.2 | 1.72 | 858.00 | 0.66 | 1.38 | 31.1 |
| 8.78 | 14.5 | 1.72 | 858.00 | 0.66 | 0.32 | 30.7 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

PURGING DATA

WATER: 73°F 8 mph SE
TASTE / ODOR: Clear / No odor

SAMPLING DATA

WATER: 73°F 8 mph SE
TASTE / ODOR: Clear / No odor

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 0.1% PLASTIC | 6 | HCL |
| 0.1% PLASTIC | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 250 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 250 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 0.1% PLASTIC | 1 | NaOH |

SIGNATURE:

1ST QUARTER 2022

| Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
|--------------------------|----------------------|-----------|----------------|----------------------------|----------|

4d

Conductivity (mS)

(7/8) SCL

(mg/L) oxygen

 $(\Lambda U$

WILSON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

[illegible]

ODOR:

Has Product

ODOR:

SAMPLE LOG

PRESERVATIVE

| |
|---|
| NaOH |
| HNO ₃ |
| HNO ₃ |
| NEAT |
| NEAT |
| Na ₂ S ₂ O ₃ |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | 2 | 1 | 1 | 1 | 1 | 1 |
|---|---|---|---|---|---|---|

27 ml PLASTIC FILTERED

CO. INC. PLASTIC

7. T. M. L. T. R.

SIGNATURE:

Released to Imaging: 8/14/2026 5:09:31 PM

MAZDAHON GALLUP REFINERY
FIRST QUARTER 2022

1ST QUARTER 2022

| Temperature | Degrees C | Conductivity | (ms) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|-------------|-----------|--------------|---------|-----------|----------------|-------------------------|----------|
| 13.7 | 13.7 | 2.21 | 1456.00 | 1.14 | 1.37 | 1.60 | 136.8 |
| 13.5 | 13.5 | 2.21 | 1431.50 | 1.14 | 1.60 | 1.63 | 158.2 |
| 13.9 | 13.9 | 2.21 | 1428.50 | 1.14 | 1.63 | -147.3 | |

220F 8mph 5C
 No odor

546E 2 mph SE wind

| SAMPLE LOG | | NUMBER OF CONTAINERS | PRESERVATIVE |
|------------|------------------|----------------------|---|
| PER | | 6 | HCL |
| PER | | 2 | NA ₂ S ₂ O ₃ |
| PER | NEAT | 2 | NEAT |
| PER | NEAT | 1 | NEAT |
| TIC | HNO ₃ | 1 | HNO ₃ |
| TIC | NEAT | 1 | HNO ₃ |
| TIC | NEAT | 1 | HNO ₃ |
| TIC | NEAT | 1 | NaOH |

10-28
2902
2-28-4
3570
12
2:40
9-27-22
12
25.12
53.40
28.28
MA
22-22-6
28-28

SIGNATURE:

DEMLER

00 ML PLASTIC

21. VAL PLASTIC FILTERED

5. ALL PLASTIC

OC NUMBER

LEER AMBER

VOA 11-1

VO²⁺ = 0

LIBRARY TYPE

NUMBER OF CONTAINERS
PRESERVATIVE

SAMPLE LOG

ODOR:

SPRING 1991

SAMPLING DATA

ODOR: 12

END

PURGING DATA

[illegible]

TEST PARAMETERS

FIRST QUARTER 2022

303 SAITHON GALLUP REFINERY

1ST QUARTER 2022

| | | | | | |
|-------------|--------------|-----------|----------------|-------------------------|----------|
| Temperature | Conductivity | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
| 10 | 100 | 10 | 10 | 10 | 10 |
| 20 | 200 | 20 | 20 | 20 | 20 |
| 30 | 300 | 30 | 30 | 30 | 30 |
| 40 | 400 | 40 | 40 | 40 | 40 |
| 50 | 500 | 50 | 50 | 50 | 50 |
| 60 | 600 | 60 | 60 | 60 | 60 |
| 70 | 700 | 70 | 70 | 70 | 70 |
| 80 | 800 | 80 | 80 | 80 | 80 |
| 90 | 900 | 90 | 90 | 90 | 90 |
| 100 | 1000 | 100 | 100 | 100 | 100 |

IV. MATTER

SIGNATURE:

1ST QUARTER 2022

| Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
|--------------------------|----------------------|-----------|----------------|----------------------------|----------|

| | | | | | | |
|-------|------|------|---------|------|------|--|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 1-948 | 25.1 | 50.0 | 00'27.6 | 8h.1 | 6.9 | |
| 848- | 25.1 | 50.0 | 00'28.6 | 25.1 | 25.2 | |

PURGING DATA

ODOR:

2011/10217

SAMPLING DATA

ODOR:

2027

SAMPLE LOG

ALL EN TYPE

2

2

7

T

T

T

COMM. PLASTIC

2011 ELASTIC

51. PLASTIC

CO. 101, AMBER

17 FEB 1968

3-15-70

W01 - C

DATE _____

Journal of Interpersonal Violence

SIGNATURE:

12:41

TEST PARAMETERS

[illegible]

PURGING DATA

• **SNOWING** *Verb* To cover with snow.

APPEARANCE / ODOR:

ENDNOTES

DRY

SAMPLING DATA

:SNOLIGNO: 8544 45

~~10. RAP ARRANGE / ODOR:~~

Fig. 1. The effect of the concentration of the solution of the initiator on the rate of polymerization of α -methylstyrene in the presence of Cu^{2+} ions. The reaction conditions: $[\text{M}] = 0.05 \text{ M}$, $[\text{Cu}^{2+}] = 0.001 \text{ M}$, $[\text{H}_2\text{O}_2] = 0.001 \text{ M}$, $[\text{H}_2\text{SO}_4] = 0.001 \text{ M}$, $[\text{H}_2\text{O}] = 0.001 \text{ M}$, $[\text{H}_2\text{O}_2] = 0.001 \text{ M}$, $[\text{H}_2\text{SO}_4] = 0.001 \text{ M}$, $[\text{H}_2\text{O}] = 0.001 \text{ M}$, $[\text{H}_2\text{O}_2] = 0.001 \text{ M}$, $[\text{H}_2\text{SO}_4] = 0.001 \text{ M}$, $[\text{H}_2\text{O}] = 0.001 \text{ M}$.

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 40 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 600 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |
| QUALITY METER | | |

SIGNATURE:

“X” UNIT “V” 10

TEST PARAMETERS

[illegible]

:SNOITIMON

TECHNICAL / BODOR:

02/11/2020

~~Purple Day~~

SAMPLING DATA

Discussion

GDOR: *[Signature]*

Clearing 0.52

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------|----------------------|--------------|
| | 6 | HCL |

CONTAINER TYPE

| | | |
|---------------------------|---|---|
| 0.000 ML VOA | 0 | |
| 0.000 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 2.000 ML AMBER | 2 | NEAT |
| 0.000 ML AMBER | 1 | NEAT |
| 0.000 ML PLASTIC | 1 | HNO ₃ |
| 0.025 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 0.000 ML PLASTIC | 1 | NaOH |

QUALITY METER

SIGNATURE:

[illegible]

MARATHON GALLUP REFINERY

THIRD QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature
e Degrees | Conductivity
y (mS/cm) | TDS (mg/L) | Salinity
(ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-----------------|---------|-------|----|--------------------------|---------------------------|------------|-------------------|----------------------------|----------|
| 9/5/22 | Initial | | | | | | | | |
| GAUGE TIME | 1 | | | | | | | | |
| DHO (FEET) | 2 | 37.51 | | | | | | | |
| DTW (FEET) | 3 | 37.54 | | | | | | | |
| DTB (FEET) | 4 | | | | | | | | |
| DTB - DTW | 5 | | | | | | | | |
| CA/ACTIVITY PER | 6 | 0.663 | | | | | | | |
| FOOT | 7 | 0.163 | | | | | | | |

| 3 WELL
VOLUMES | WEATHER CONDITIONS: | WATER APPEARANCE / ODOR: | COMMENTS: | PURGE DATE | END OF
PURGE TIME | PURGE
AMOUNT | DTW (FEET) |
|-------------------|---------------------|--------------------------|-------------|------------|----------------------|-----------------|------------|
| | | | Has Product | | | | |

| SAMPLE DATE | WEATHER CONDITIONS: | WATER APPEARANCE / ODOR: | COMMENTS: |
|-------------|---------------------|--------------------------|-----------|
| | | | |

SAMPLE LOG

| SAMPLE TYPE | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------|----------------------|---|
| 40 ML VOA | 6 | | HCL |
| 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | | NEAT |
| 500 ML AMBER | 1 | | NEAT |
| 250 ML PLASTIC | 1 | | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | | HNO ₃ |
| 500 ML PLASTIC | 1 | | NaOH |

| INSTRUMENTS USE | WATER LEVEL PROBE | WATER QUALITY METER |
|-----------------|-------------------|---------------------|
| | | |

COMPLETED BY: SIGNATURE:

COMPLETION

THIRD QUARTER 2022

[illegible]

Released to Imaging: 8/14/2026 5:09:31 PM

[illegible]

SIGNATURE:

COMPLET

FIRST QUARTER 2022

SIGNATURE:

FIRST QUARTER 2022

CONFIDENTIAL

[illegible]

MARATHON GALLUP REFINERY
 FIRST QUARTER 2022

FIRST QUARTER 2022

[illegible]

RE/ODOR:

Has Product

NAME / ADDRESS / PHONE:

PRESERVATIVE

NUMBER OF CONTAINERS

ALTER TYPE

$$\text{Na}_2\text{S}_2\text{O}_3$$

VOA 100

NEAT

MEMBER

 ε_{ONH}

6017 PLASTIC

 ε_{NH}

12:10 PM PLASTIC FILTERED

 NaOH

600 ML PLASTIC

ER

SIGNATURE:

—FIRST QUARTER 2022

[illegible]

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature Degrees C | Conductivity (ms) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|---------------|------------|------|------|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| NAPI-3 | 9-2-22 | 2:20 | 7.18 | 17.2 | 1.42 | 923.00 | 0.71 | 1.70 | -98.6 |
| | | 2:25 | 7.19 | 17.4 | 1.41 | 911.56 | 0.76 | 1.17 | -98.1 |
| | | 2:30 | 7.19 | 17.3 | 1.41 | 911.50 | 0.71 | 1.16 | -97.8 |
| DHC (FEET) | NA | | | | | | | | |
| DHW (FEET) | 9.75 | | | | | | | | |
| DIB (FEET) | 24.30 | | | | | | | | |
| DIO-DIV | 14.55 | | | | | | | | |
| CAPACITY FEET | 0.803 - 4" | | | | | | | | |
| FOOT | 0.103 - 2" | | | | | | | | |

PURGING DATA

| | | | | | | | |
|-------------------|---------|---------------------|---|--------------------------|-----------------------|-----------|--|
| 3 WELL VOLUMES | 7 | WEATHER CONDITIONS: | Swampy / 33°F / cloudy / 6 mph SW winds | WATER APPEARANCE / ODOR: | light brown / no odor | COMMENTS: | |
| CHARGE DATE | 9-13-22 | | | | | | |
| END OF PURGE TIME | 2:30 | | | | | | |
| PURGE VOLUME | 7 | | | | | | |
| WTW (FEET) | 22.00 | | | | | | |

SAMPLING DATA

| | | | | | | | |
|-------------|---------|---------------------|---------------------------------|--------------------------|-----------------------|-----------|--|
| SAMPLE DATE | 9/14/22 | WEATHER CONDITIONS: | Cloudy / 63°F / 10 mph SW winds | WATER APPEARANCE / ODOR: | light brown / no odor | COMMENTS: | |
| WTW (FEET) | 9.81 | | | | | | |
| SAMPLE TIME | 11:45 | | | | | | |

SAMPLE LOG

| | | | |
|---|----------------------|-------------------------|--------------|
| PRESERVATIVE | NUMBER OF CONTAINERS | CONTAINER TYPE | CONTAINER ID |
| HCL | 6 | 40 ML VOA | |
| NA ₂ S ₂ O ₃ | 2 | 40 ML VOA | |
| NEAT | 2 | 1 LITER AMBER | |
| NEAT | 1 | 500 ML AMBER | |
| HNO ₃ | 1 | 250 ML PLASTIC | |
| HNO ₃ | 1 | 125 ML PLASTIC FILTERED | |
| NaOH | 1 | 500 ML PLASTIC | |
| INSTRUMENTS USED | | | |
| WATER QUALITY METER | | | |

SIGNATURE:

COMP. END BY:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

SIGNATURE:

| TEST PARAMETERS | | | | | | | | | |
|-----------------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|--|--|
| TIME | pH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | | |
| 1330 | 7.78 | 19.6 | 6.23 | 4049.5 | 3.4 | 4.86 | 102.7 | | |
| 1335 | 7.02 | 14.9 | 6.27 | 4069.0 | 3.43 | 4.86 | 73.3 | | |
| 1337 | 7.82 | 15.3 | 6.16 | 4017.0 | 3.39 | 4.08 | 55.2 | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

PURGING DATA

CONDITIONS:

Sunny / 75°F / 4 mph SE

WIND DIRECTION / WIND SPEED / WIND GUST / WIND CHILL / WIND ROAR / WIND RAIN / WIND SNOW / WIND SMOKE / WIND SOUND / WIND TASTE / WIND TOUCH / WIND TASTE / WIND TOUCH

Clear / No odor

SAMPLING DATA

CONDITIONS:

Sunny / Cloudy / 79°F

WIND DIRECTION / WIND SPEED / WIND GUST / WIND CHILL / WIND ROAR / WIND RAIN / WIND SNOW / WIND SMOKE / WIND SOUND / WIND TASTE / WIND TOUCH / WIND TASTE / WIND TOUCH

Clear / No odor

SAMPLE LOG

CONTAINER TYPE NUMBER OF CONTAINERS PRESERVATIVE

| | | |
|-------------------------|---|---|
| 40 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 2 LITER AMBER | 2 | NEAT |
| 800 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 800 ML PLASTIC | 1 | NaOH |

QUANTITY

STP-1 - NM
9-2-22
14
9-9-22
1337
15 gal
44.14
9-20-22
39.30
17:40

MAHON GALLUP REFINERY
FIRST QUARTER 2022

FIRST QUARTER 2022

TIME

MS-1-DLS








45

EN

120

DATE: 10/10/1964

13

Figure 1 illustrates the structure of a single neuron. The central part is the cell body (soma), which contains a nucleus. A dendrite extends from the soma, and an axon extends from the other side. The axon is divided into a myelinated section, covered by a myelin sheath, and an unmyelinated section.

54. 386

三、 2000 年 12 月 25 日

1001

$$I = \sum_{i=1}^n \lambda_i \mathcal{M}_i$$
$$J_{\text{eff}} = \frac{1}{2} \left(\frac{1}{\mu} + \frac{1}{m} \right) \left(\frac{1}{\mu} + \frac{1}{m} \right) \left(\frac{1}{\mu} + \frac{1}{m} \right)$$

6-11-1945

DOI: 10.1002/for

RESULTS

[illegible]

Figure 1

ODOR: None

PRESERVATIVE

NUMBER OF CONTAINERS

INTER TYPE

WCA 71 -

HCL

9

YOUNG C

 $\text{Na}_2\text{S}_{2.2}\text{O}_3$

2.

NUMBER

NEAT

II

MEMBER

 ε_{ONH}

T

25 ML PLASTIC FILTERED

 ε_{NH}

1

CO. INC. PLASTIC

 NaOH

1

INTER

SIGNATURE:

MAEATHON GALLUP REFINERY

THE

1775 Products

SIGNATURE:

Y. MATHER

FOOD MIL. PLASTIC

2.3 ML PLASTIC FILTERED

PLASTIC

NUMBER

NUMBER

VOA - 0

ALVDA

PRINTED TYPE

NUMBER OF CONTAINERS
PRESERVATIVE

SAMPLE LOG

DATE / TIME

SAMPLING DATA

THE JOURNAL OF THE

PURGING DATA

EML

HC

Temperature
Degrees C

Conductivity (mS)

TDS (g/L)

Salinity (ppt)

Dissolved
Oxygen (mg/L)

ORP (mv)

TEST PARAMETERS

1ST QUARTER 2022

NEARATHON GALLUP REFINERY

AD
EN

22151b

2-10-19

FIRST QUARTER 2022

CONFIDENTIAL

[illegible]

SIGNATURE:

QUALITY MEASURES

JOURNAL PLASTIC

125 ML PLASTIC FILTERED

250 ML PLASTIC

000 141 AMBER

2. LUTHER AMBER

4:01 PM VOA

VOA 11.1 VOA

PRESERVATIVE

NUMBER OF CONTAINERS

CONSUMER TYPE

SAMPLE LOG

ODOR:

Cloudy 11 mph SW winds

300-101108:

SAMPLING DATA

1. 4. 1991 / 1991

10 mph NW winds / 730F / 6/24/14

501100

PURGING DATA

TEST PARAMETERS

FIRST QUARTER 2022

MAIRA HON GALLUP REFINERY

WILSON, J. M. 1990. *ANCO*.

(55) ML

DATE

U. S. M. 1999

JUN 20 1964

ORG 113

FILED

13. 1070

154

MACHER

110-2

1000

10. 2/2/2017

(1) $\mathbb{E}(\mathbf{F}) = \mathbf{0}$

2000

CONCLUSIONS

— 27 —

10

Released to Imaging: 8/14/2026 5:09:31 PM

First quarter 2022

CONFIDENTIAL

[illegible]

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | DATE | TIME | PH | Temperature
Degrees C | Conductivity
(ms) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|--------------|------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| PC-4 | 9-8-22 | 9:40 | 7.26 | 19.4 | 0.95 | 613.50 | 0.47 | 1.07 | -35.0 |
| GAUGE TIME | 1 | | | | | | | | |
| DHC (FEET) | 2 | | | | | | | | |
| DTW (FEET) | 3 | | | | | | | | |
| DIB (FEET) | 4 | | | | | | | | |
| DTD - DAV | 5 | | | | | | | | |
| CARAOIN FERR | 6 | | | | | | | | |
| FOOT | 0.158 - 2" | | | | | | | | |

PURGING DATA

| | |
|--------------------------|--|
| WEATHER CONDITIONS: | |
| WATER APPEARANCE / ODOR: | |
| COMMENTS: | |
| END OF | |
| PURGE TIME | |
| PURGE | |
| AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|--------------------------|--------|
| WEATHER CONDITIONS: | |
| WATER APPEARANCE / ODOR: | |
| COMMENTS: | |
| SAMPLE TIME | 9:40 |
| DTW (FEET) | |
| SAMPLE DATE | 9-8-22 |

SAMPLE LOG

| | | | |
|----------------------|-------------------------|---|---|
| CONTAINER TYPE | 40 ML VOA | 6 | HCL |
| NUMBER OF CONTAINERS | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| PRESERVATIVE | NEAT | 2 | NEAT |
| | 1 LITER AMBER | 1 | NEAT |
| | 500 ML AMBER | 1 | HNO ₃ |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |
| INSTRUMENTS USED | WATER QUALITY METER | | |

SIGNATURE:

COMPLETION DATE:

MARATHON GALLUP REFINERY
FIRST QUARTER 2022

SIGNATURE:

Q. M. J. 10

ELECTRONIC SITE USE • 100% RADIATION • RADIATION METER

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-------------------------|----------------------|---|
| 100 ML VOA | 6 | HCL |
| 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | 2 | NEAT |
| 500 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| 500 ML PLASTIC | 1 | NaOH |
| QUANTITY METER | | |

SAMPLE LOG

[illegible]

7- RAY-BLANK / ODOR:

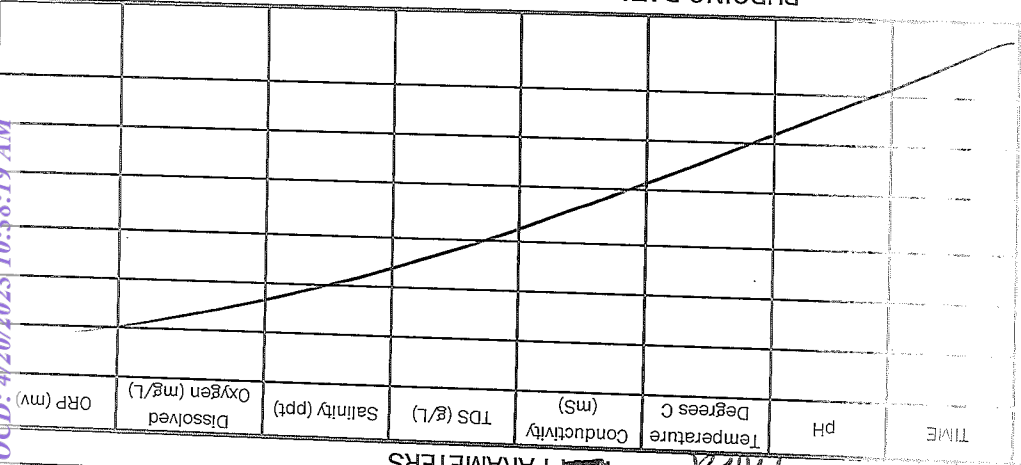
:SNOLIGNO: REHIT

SAMPLING DATA

APPEARANCE / ODOR:

OTHER CONDITIONS

PURGING DATA



TEST PARAMETERS

SELECTION

TIME

Hd

Temperature

Conductivity

TPS (x/1)

(4-5) 741a11es

Dissolved

22-1-b
9-1-22
109 drums
101

FIRST QUARTER 2022

CONFIDENTIAL

[illegible]

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

TEST PARAMETERS

| WELL ID | GAUGE DATE | GAUGE TIME | DHC (FEET) | DTW (FEET) | DTB - D/W | CAPACITY PER FOOT | WATER | PH | Temperature Degrees C | Conductivity (ms) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|---------|------------|------------|------------|------------|-----------|-------------------|-------|----|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| EF-2 | | | 1 | | | 0.003 - 4" | 6 | | | | | | | |
| | | | 2 | | | | | | | | | | | |
| | | | 3 | | | | | | | | | | | |
| | | | 4 | | | | | | | | | | | |
| | | | 5 | | | | | | | | | | | |
| | | | 6 | | | 0.103 - 2" | | | | | | | | |

PURGING DATA

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

3 WELL VOLUMES

PURGE DATE

END OF PURGE TIME

PURGE AMOUNT

DTW (FEET)

SAMPLE DATE

DTW (FEET)

SAMPLE TIME

SAMPLING DATA

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

SAMPLE LOG

PRESERVATIVE

NUMBER OF CONTAINERS

CONTAINER TYPE

SAMPLE ID

40 ML VOA

40 ML VOA

1 LITER AMBER

500 ML AMBER

250 ML PLASTIC

125 ML PLASTIC FILTERED

500 ML PLASTIC

WATER QUALITY METER

INSTRUMENTS USED

SIGNATURE:

COMPL. ENCL. BY:



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix A-4. 4th Quarter Field Logs

MARATHON GALLUP REFINERY

4th ~~EST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTG-01B | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/ | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 3.49 | 2 | | | | | | | | |
| DTW (FEET) | 3.55 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|-------------------|-----------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-02R | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 9.98 | Initial | | | | | | | | |
| GAUGE TIME | 7 | 1 | | | | | | | | |
| DHC (FEET) | 9.98 | 2 | | | | | | | | |
| DTW (FEET) | 10.03 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|-------------------|--|--------------------------|
| 3 WELL VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF PURGE TIME | | COMMENTS: |
| PURGE AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| M47F-03 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/ | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 8.02 | 2 | | | | | | | | |
| DTW (FEET) | 10.47 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|---|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-04R | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 9.50 | 2 | | | | | | | | |
| DTW (FEET) | 9.55 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE | | | | | | | |
| | 40 ML VOA | 6 | HCL | | | | | | | |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | | | | | | | |
| | 1 LITER AMBER | 2 | NEAT | | | | | | | |
| | 500 ML AMBER | 1 | NEAT | | | | | | | |
| | 250 ML PLASTIC | 1 | HNO ₃ | | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | | | | | | | |
| | 500 ML PLASTIC | 1 | NaOH | | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-05 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.23 | 2 | | | | | | | | |
| DTW (FEET) | 15.76 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-06 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 10/27 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 17.55 | 2 | | | | | | | | |
| DTW (FEET) | 18.98 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~EST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK7F-07 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.06 | 2 | | | | | | | | |
| DTW (FEET) | 15.41 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~EST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-08 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.31 | 2 | | | | | | | | |
| DTW (FEET) | 19.31 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MATE-09 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mV) |
| GAUGE DATE | 17/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.32 | 2 | | | | | | | | |
| DTW (FEET) | 15.40 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|-------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK7E-10 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 8.70 | 2 | | | | | | | | |
| DTW (FEET) | 8.29 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~3rd~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-11 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 8.77 | 2 | | | | | | | | |
| DTW (FEET) | 8.82 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT# - 12 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 19.95 | 2 | | | | | | | | |
| DTW (FEET) | 20.11 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-13 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 14.88 | 2 | | | | | | | | |
| DTW (FEET) | 15.70 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-14 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 7.41 | 2 | | | | | | | | |
| DTW (FEET) | 7.55 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKT-15 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 13.96 | 2 | | | | | | | | |
| DTW (FEET) | 14.59 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|------------------------------------|----------------------|------|---|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-16 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 16:20 | 7.47 | 14.0 | 0.71 | 461.50 | 0.37 | 2.06 | -33.7 |
| GAUGE TIME | | 1 | 16:30 | 7.45 | 13.8 | 0.76 | 420.00 | 0.37 | 2.04 | -33.4 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 10.32 | 3 | | | | | | | | |
| DTE (FEET) | 10.92 | 4 | | | | | | | | |
| DTE - DTW | .60 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 0.30 | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | 12/5/22 | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | 16:30 | COMMENTS: Purged Dry | | | | | | | | |
| PURGE
AMOUNT | .50 | | | | | | | | | |
| DTW (FEET) | DRY | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/6/22 | WEATHER CONDITIONS: Cloudy / Windy | | | | | | | | |
| DTW (FEET) | 10.52 | WATER APPEARANCE / ODOR: Grayish | | | | | | | | |
| SAMPLE TIME | 16:20 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-17R | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 12.50 | 2 | | | | | | | | |
| DTW (FEET) | 12.60 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|---|----------------------|------|---|----------------------|-----------|----------------|----------------------------|----------|
| MK7F-18R | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 1:10 | 6.71 | 15.7 | 2.12 | 1378.00 | 1.10 | 0.92 | -166.3 |
| GAUGE TIME | | 1 | 1:15 | 6.73 | 15.5 | 2.12 | 1378.00 | 1.09 | 0.85 | -247.3 |
| DHC (FEET) | NA | 2 | 1:18 | 6.72 | 15.8 | 2.15 | 1392.50 | 1.11 | 0.84 | -282.3 |
| DTW (FEET) | 10.76 | 3 | | | | | | | | |
| DTB (FEET) | 25.46 | 4 | | | | | | | | |
| DTB - DTW | 14.70 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 7.25 | WEATHER CONDITIONS:
Cloudy / Windy | | | | | | | | |
| PURGE DATE | 12/5/22 | WATER APPEARANCE / ODOR:
Brown / slight HC odor | | | | | | | | |
| END OF
PURGE TIME | 1:20 | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | 7.85 | | | | | | | | | |
| DTW (FEET) | 18.55 | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/6/22 | WEATHER CONDITIONS:
Cloudy | | | | | | | | |
| DTW (FEET) | 10.80 | WATER APPEARANCE / ODOR:
Brownish / slight HC odor | | | | | | | | |
| SAMPLE TIME | 9:50 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-19 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.12 | 2 | | | | | | | | |
| DTW (FEET) | 15.44 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | 1 | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-20 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | DRY | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: DRY | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: DRY | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 12/1 MKT-21 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | DRY | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | DRY |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |
| | | DRY |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

Faith ~~FAST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-22 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 25.76 | 2 | | | | | | | | |
| DTW (FEET) | 27.57 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

Has produced

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~3rd~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKT#-23 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 14.31 | 2 | | | | | | | | |
| DTW (FEET) | 14.40 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: Has Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | Na ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~QUARTER~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-221 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 23.77 | 2 | | | | | | | | |
| DTW (FEET) | 23.82 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

9th ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK7E-25 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 13.64 | 2 | | | | | | | | |
| DTW (FEET) | 13.68 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-26 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 9.03 | 2 | | | | | | | | |
| DTW (FEET) | 9.10 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

Q4 2022 QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF - 27 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:28 | 6.94 | 11.6 | 7.01 | 4523.00 | 3.87 | 1.67 | 83.1 |
| GAUGE TIME | | 1 | 2:32 | 6.98 | 12.0 | 7.27 | 4775.50 | 4.03 | 1.64 | 76.5 |
| DHC (FEET) | NA | 2 | 2:35 | 6.91 | 12.2 | 7.87 | 4699.00 | 4.06 | 1.63 | 82.2 |
| DTW (FEET) | 6.81 | 3 | | | | | | | | |
| DTE (FEET) | 14.78 | 4 | | | | | | | | |
| DTE - DTW | 7.97 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 3.75 | WEATHER CONDITIONS: | Cloudy / Rain |
| PURGE DATE | 12/7/22 | WATER APPEARANCE / ODOR: | clear / no odor |
| END OF
PURGE TIME | 2:35 | COMMENTS: | |
| PURGE
AMOUNT | 3.75 | | |
| DTW (FEET) | 12.10 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/8/22 | WEATHER CONDITIONS: | Sunny |
| DTW (FEET) | 9.33 | WATER APPEARANCE / ODOR: | clear / no odor |
| SAMPLE TIME | 16:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--|---|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK7F-28 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/11/22 | Initial | 2:46 | 7.24 | 14.3 | 3.76 | 2450.80 | 2.01 | 2.30 | 96.4 |
| GAUGE TIME | | 1 | 2:50 | 7.13 | 14.6 | 3.74 | 2424.50 | 1.98 | 93.5 | 97.17 |
| DHC (FEET) | NA | 2 | 2:55 | 7.09 | 14.3 | 3.89 | 1993.50 | 1.02 | 2.17 | 98.0 |
| DTW (FEET) | 10.25 | 3 | | | | | | | | |
| DTE (FEET) | 16.15 | 4 | | | | | | | | |
| DTE - DTW | 5.9 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 2.75 | WEATHER CONDITIONS:
Cloudy Rain | | | | | | | | |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR:
Brownish / no odor | | | | | | | | |
| END OF
PURGE TIME | 2:55 | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | 2.75 | | | | | | | | | |
| DTW (FEET) | 10. | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS:
Cloudy / Rain | | | | | | | | |
| DTW (FEET) | 14.03 | WATER APPEARANCE / ODOR:
Brownish / no odor | | | | | | | | |
| SAMPLE TIME | 2:55 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE | | | | | | | |
| | 40 ML VOA | 6 | HCL | | | | | | | |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | | | | | | | |
| | 1 LITER AMBER | 2 | NEAT | | | | | | | |
| | 500 ML AMBER | 1 | NEAT | | | | | | | |
| | 250 ML PLASTIC | 1 | HNO ₃ | | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | | | | | | | |
| | 500 ML PLASTIC | 1 | NaOH | | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|--|----------------------|------|---|----------------------|-----------|----------------|----------------------------|----------|
| MKT-F-29 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:46 | 7.24 | 14.3 | 3.76 | 2450.50 | 2.01 | 2.30 | 90.4 |
| GAUGE TIME | | 1 | 2:50 | 7.13 | 14.6 | 3.74 | 2424.50 | 1.98 | 2.17 | 93.5 |
| DHC (FEET) | NA | 2 | 2:55 | 7.69 | 14.3 | 3.78 | 2293.50 | 2.17 | 2.17 | 95.0 |
| DTW (FEET) | 6.25 | 3 | | | | | | 1.92 | | |
| DTE (FEET) | 22.83 | 4 | | | | | | | | |
| DTB - DTW | 16.58 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 2.75 | WEATHER CONDITIONS:
Cloudy Rain | | | | | | | | |
| PURGE DATE | 12/7/22 | WATER APPEARANCE / ODOR:
Brownish / No odor | | | | | | | | |
| END OF
PURGE TIME | 12/7/22 | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | 2.75 | | | | | | | | | |
| DTW (FEET) | 14.03 | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/8/22 | WEATHER CONDITIONS:
Sunny | | | | | | | | |
| DTW (FEET) | 13.41 | WATER APPEARANCE / ODOR:
Clear / No odor | | | | | | | | |
| SAMPLE TIME | 16:40 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------------------|---|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-30 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | 16:00 | 7.36 | 13.2 | 3.75 | 2489.50 | 1.95 | 4.30 | 250.2 |
| GAUGE TIME | | 1 | 16:10 | 7.38 | 13.8 | 3.70 | 2411.00 | 1.93 | 4.22 | 233.6 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 16.42 | 3 | | | | | | | | |
| DTE (FEET) | 23.23 | 4 | | | | | | | | |
| DTE - DTW | 6.81 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 3.25 | WEATHER CONDITIONS:
Cloudy | | | | | | | | |
| PURGE DATE | 12/1/22 | WATER APPEARANCE / ODOR:
Brownish | | | | | | | | |
| END OF
PURGE TIME | 16:00 | COMMENTS:
Purged Dry | | | | | | | | |
| PURGE
AMOUNT | 1.50 | | | | | | | | | |
| DTW (FEET) | DRY | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/1/22 | WEATHER CONDITIONS:
Cloudy | | | | | | | | |
| DTW (FEET) | 16.63 | WATER APPEARANCE / ODOR:
Brownish | | | | | | | | |
| SAMPLE TIME | 10:00 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE | | | | | | | |
| | 40 ML VOA | 6 | HCL | | | | | | | |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | | | | | | | |
| | 1 LITER AMBER | 2 | NEAT | | | | | | | |
| | 500 ML AMBER | 1 | NEAT | | | | | | | |
| | 250 ML PLASTIC | 1 | HNO ₃ | | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | | | | | | | |
| | 500 ML PLASTIC | 1 | NaOH | | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MLTF-31 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:13 | 7.22 | 12.2 | 2.09 | 1358.50 | 1.07 | 2.39 | 62.5 |
| GAUGE TIME | | 1 | 2:16 | 7.07 | 12.8 | 2.16 | 1404.00 | 1.11 | 1.93 | 59.5 |
| DHC (FEET) | NA | 2 | 2:18 | 7.08 | 12.7 | 2.14 | 1144.33 | 1.01 | 1.99 | 59.2 |
| DTW (FEET) | 9.65 | 3 | | | | | | | | |
| DTE (FEET) | 19.38 | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 4.75 | WEATHER CONDITIONS: | Cloudy / Rain |
| PURGE DATE | 12/7/22 | WATER APPEARANCE / ODOR: | Brown / NO odor |
| END OF
PURGE TIME | 2:18 | COMMENTS: | |
| PURGE
AMOUNT | 4.75 | | |
| DTW (FEET) | 16.35 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/8/22 | WEATHER CONDITIONS: | Sunny |
| DTW (FEET) | 9.67 | WATER APPEARANCE / ODOR: | Clear / NO odor |
| SAMPLE TIME | 10:15 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

44 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-32 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | 11:30 | 7.16 | 16.4 | 2.20 | 1366.50 | 1.12 | 1.77 | 15.2 |
| GAUGE TIME | | 1 | 11:35 | 7.16 | 17.1 | 2.19 | 1344.00 | 1.11 | 1.69 | 14.5 |
| DHC (FEET) | NA | 2 | 11:40 | 7.18 | 17.2 | 2.20 | 1378.50 | 1.12 | 1.64 | 13.5 |
| DTW (FEET) | 9.81 | 3 | | | | | | | | |
| DTE (FEET) | 19.46 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

| PURGING DATA | |
|----------------------|---------|
| 3 WELL
VOLUMES | 4.75 |
| PURGE DATE | 12/8/22 |
| END OF
PURGE TIME | 11:40 |
| PURGE
AMOUNT | 4.75 |
| DTW (FEET) | 10.15 |

| SAMPLING DATA | |
|---------------|----------|
| SAMPLE DATE | 12/29/22 |
| DTW (FEET) | 9.90 |
| SAMPLE TIME | 12:50 |

| SAMPLE LOG | | | |
|------------|-------------------------|----------------------|---|
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/19 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|-------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| MK7F-33 | | | | | | | | | | |
| GAUGE DATE | 12/1/27 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 23.48 | 2 | | | | | | | | |
| DTW (FEET) | 23.55 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~TH~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-34 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 18.75 | 2 | | | | | | | | |
| DTW (FEET) | 18.82 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

9th ~~EST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-35 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 10.01 | 2 | | | | | | | | |
| DTW (FEET) | 10.05 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAD Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

Q4 4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|-------------------|------------|-----------------|------|----|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| MKTF-36 | | Volumes | TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 8.40 | 2 | | | | | | | | |
| DTW (FEET) | 8.48 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|-------------------|--|--------------------------|
| 3 WELL VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF PURGE TIME | | COMMENTS: |
| PURGE AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~3rd~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MktF-37 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 16.60 | 2 | | | | | | | | |
| DTW (FEET) | 16.64 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|-------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS:
HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

11/16 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|---|----------------------|------|---|----------------------|-----------|----------------|----------------------------|----------|
| MK7F-38 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 10:00 | 6.97 | 13.4 | 2.416 | 1599.00 | 1.27 | 1.69 | 24.3 |
| GAUGE TIME | | 1 | 10:15 | 6.91 | 13.6 | 2.50 | 1625.00 | 1.70 | 1.46 | 28.4 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 16.32 | 3 | | | | | | | | |
| DTE (FEET) | 20.30 | 4 | | | | | | | | |
| DTB - DTW | 9.98 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 5 | WEATHER CONDITIONS:
Cloudy | | | | | | | | |
| PURGE DATE | 12/5/22 | WATER APPEARANCE / ODOR:
Grayish / with look like bugs / 11/6000 | | | | | | | | |
| END OF
PURGE TIME | - | COMMENTS:
Purged Dry | | | | | | | | |
| PURGE
AMOUNT | 1.50 | | | | | | | | | |
| DTW (FEET) | DRY | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 10/6/22 | WEATHER CONDITIONS:
Cloudy | | | | | | | | |
| DTW (FEET) | 16.46 | WATER APPEARANCE / ODOR:
Grayish / still has little white bugs | | | | | | | | |
| SAMPLE TIME | 16:00 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

yfh FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| MKT-39 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 16.52 | 2 | | | | | | | | |
| DTW (FEET) | 10.67 | 3 | | | | | | | | |
| DYE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-40 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 1:55 | 6.96 | 13.5 | 9.98 | 64.93 | 5.66 | 2.74 | 29.3 |
| GAUGE TIME | | 1 | 1:59 | 6.84 | 14.5 | 8.85 | 4589.00 | 4.91 | 2.47 | 38.9 |
| DHC (FEET) | NA | 2 | 2:05 | 14.5 | 16.83 | 10.06 | 6545.00 | 5.71 | 2.44 | 47.9 |
| DTW (FEET) | 14.21 | 3 | | | | | | | | |
| DTE (FEET) | 23.65 | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 4.5 | WEATHER CONDITIONS: | Cloudy / Rain |
| PURGE DATE | 12/7/22 | WATER APPEARANCE / ODOR: | Clear / NO odor |
| END OF
PURGE TIME | 2:05 | COMMENTS: | |
| PURGE
AMOUNT | 4.5 | | |
| DTW (FEET) | 23.45 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/8/22 | WEATHER CONDITIONS: | Sunny |
| DTW (FEET) | 19.15 | WATER APPEARANCE / ODOR: | Clear / NO odor |
| SAMPLE TIME | 9:50 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

476 ~~115~~ 1ST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK715.41 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:15 | 7.48 | 16.3 | 2.67 | 1655.50 | 1.38 | 0.98 | 8.9 |
| GAUGE TIME | | 1 | 2:20 | 7.82 | 13.2 | 2.64 | 1678.00 | 1.40 | 1.61 | 8.5 |
| DHC (FEET) | NA | 2 | 2:25 | 7.90 | 13.5 | 2.70 | 1650.80 | 1.78 | 1.10 | 8.9 |
| DTW (FEET) | 21.19 | 3 | | | | | | | | |
| DTE (FEET) | 39.75 | 4 | | | | | | | | |
| DTE - DTW | 18.57 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|---------------|
| 3 WELL
VOLUMES | 9 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/28/22 | WATER APPEARANCE / ODOR: | Clear/NO odor |
| END OF
PURGE TIME | 2:25 | COMMENTS: | |
| PURGE
AMOUNT | 9 | | |
| DTW (FEET) | 34.85 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|---------------|
| SAMPLE DATE | 12/29/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 22.55 | WATER APPEARANCE / ODOR: | Clear/NO odor |
| SAMPLE TIME | 12:35 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

Q4 ~~2021~~ 4TH QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-042 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/27 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 16.89 | 2 | | | | | | | | |
| DTW (FEET) | 17.20 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| M67F-43 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 3:25 | 6.32 | 16.2 | 48.5 | 2425.5 | 24.3 | 1.30 | 65.2 |
| GAUGE TIME | | 1 | 3:30 | 6.45 | 16.8 | 47.2 | 2548.5 | 26.5 | 1.15 | 48.5 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 8.16 | 3 | | | | | | | | |
| DTE (FEET) | 16.95 | 4 | | | | | | | | |
| DTE - DTW | 8.85 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|---------------|
| 3 WELL
VOLUMES | 4.5 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/2/22 | WATER APPEARANCE / ODOR: | clear/no odor |
| END OF
PURGE TIME | 3:35 | COMMENTS: | |
| PURGE
AMOUNT | 4.5 | | |
| DTW (FEET) | 41.70 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|---------------|
| SAMPLE DATE | 12/2/22 | WEATHER CONDITIONS: | clear/no odor |
| DTW (FEET) | 8.78 | WATER APPEARANCE / ODOR: | Cloudy |
| SAMPLE TIME | 17:00 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|---|----------------------|------|---|----------------------|-----------|----------------|----------------------------|----------|
| MR7F-44 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 11:00 | 8.18 | 15.2 | 1.70 | 1125.50 | 6.82 | 3.27 | 62.5 |
| GAUGE TIME | | 1 | 11:10 | 8.20 | 15.0 | 1.68 | 1155.50 | 6.88 | 3.33 | 68.7 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 36.52 | 3 | | | | | | | | |
| DTE (FEET) | 51.20 | 4 | | | | | | | | |
| DTE - DTW | 14.68 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | 7.25 | WEATHER CONDITIONS: Cloudy | | | | | | | | |
| PURGE DATE | 12/21/22 | WATER APPEARANCE / ODOR: Brown / no odor | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: Purged Dry | | | | | | | | |
| PURGE
AMOUNT | 6.00 | | | | | | | | | |
| DTW (FEET) | DRY | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/22/22 | WEATHER CONDITIONS: Cloudy | | | | | | | | |
| DTW (FEET) | 33.78 | WATER APPEARANCE / ODOR: Brownish / no odor | | | | | | | | |
| SAMPLE TIME | 11:00 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/16 ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MGT-415 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/72 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 15.61 | 2 | | | | | | | | |
| DTW (FEET) | 15.11 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|-------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY
9th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKT-46 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | | Initial | 11:36 | 6.90 | 15.1 | 1.97 | 1285.50 | 1.01 | 2.28 | 15.6 |
| GAUGE TIME | | 1 | 11:39 | 6.84 | 13.4 | 1.95 | 1285.50 | 1.01 | 2.92 | 18.6 |
| DHC (FEET) | NA | 2 | 11:44 | 6.86 | 12.9 | 1.95 | 1267.80 | 1.02 | 2.67 | 18.9 |
| DTW (FEET) | 17.26 | 3 | | | | | | | | |
| DTE (FEET) | 21.80 | 4 | | | | | | | | |
| DTE - DTW | 9.6 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 4.70 | WEATHER CONDITIONS: | Cloudy, windy |
| PURGE DATE | 12/3/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 11:45 | COMMENTS: | |
| PURGE
AMOUNT | 4.75 | | |
| DTW (FEET) | 17.03 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|--------|
| SAMPLE DATE | 12/6/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 17:55 | WATER APPEARANCE / ODOR: | Clear |
| SAMPLE TIME | 9:26 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/16 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MK7F-47 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 11.16 | 2 | | | | | | | | |
| DTW (FEET) | 11.25 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|-------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS: HAS Problem |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/16 ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-48 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 14.00 | 2 | | | | | | | | |
| DTW (FEET) | 14.64 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/6 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-49 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 21.34 | 2 | | | | | | | | |
| DTW (FEET) | 22.49 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/14 ~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| MKTF-50 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 1/11/23 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 16.419 | 2 | | | | | | | | |
| DTW (FEET) | 17.416 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| BW-1 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 31.67 | 2 | | | | | | | | |
| DTW (FEET) | 31.89 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

HDS Product

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| RW-2 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/2/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 2927 | 2 | | | | | | | | |
| DTW (FEET) | 26.45 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

| PURGING DATA | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

| SAMPLING DATA | |
|---------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS: HAS Product |

| SAMPLE LOG | | | |
|------------|-------------------------|----------------------|---|
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4/16 ~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| RW-5 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 31.55 | 2 | | | | | | | | |
| DTW (FEET) | 33.33 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| RW-6 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (opt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 31.75 | 2 | | | | | | | | |
| DTW (FEET) | 33.53 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-58A | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 28.55 | 2 | | | | | | | | |
| DTW (FEET) | 29.91 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-61 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 24.98 | 2 | | | | | | | | |
| DTW (FEET) | 26.14 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

qjh ~~TEST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-62 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 23.83 | 2 | | | | | | | | |
| DTW (FEET) | 24.25 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~1st~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 04W-65 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 32.42 | 2 | | | | | | | | |
| DTW (FEET) | 32.64 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: HAS Product |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| GWM-1 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 21.61 | 2 | | | | | | | | |
| DTW (FEET) | 23.08 | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-----------|--------------------------|----------------------|----|---|----------------------|-----------|----------------|----------------------------|----------|
| GWM - 2 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | DRY | 3 | | | | | | | | |
| DTE (FEET) | | 4 | | | | | | | | |
| DTE - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4 | 6 | | | | | | | | |
| | 0.163 - 2 | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: DRY | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | |
| | | 40 ML VOA | 6 | | HCL | | | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| GWM-3 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | DRY | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|--|--------------------------|
| SAMPLE DATE | | WEATHER CONDITIONS: |
| DTW (FEET) | | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | | COMMENTS: DRY |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/14 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|--------------------------|------|---|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| NAPIS-1 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | 7.63 | 2 | | | | | | | | |
| DTW (FEET) | 7.68 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: HAS Product | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | | | |
| | 40 ML VOA | 6 | | HCL | | | | | | |
| | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | | | | |
| | 1 LITER AMBER | 2 | | NEAT | | | | | | |
| | 500 ML AMBER | 1 | | NEAT | | | | | | |
| | 250 ML PLASTIC | 1 | | HNO ₃ | | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | | | | |
| | 500 ML PLASTIC | 1 | | NaOH | | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

9/16 ~~2022~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-1 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 12:56 | 8.30 | 15.2 | 1.410 | 94050 | 0.70 | 2.35 | 58.5 |
| GAUGE TIME | | 1 | 12:53 | 8.35 | 16.5 | 1.42 | 93000 | 0.68 | 2.33 | 65.8 |
| DHC (FEET) | NA | 2 | 1:00 | 8.34 | 15.2 | 1.42 | 92750 | 0.72 | 2.45 | 68.3 |
| DTW (FEET) | 1.50 | 3 | | | | | | | | |
| DTE (FEET) | 90.50 | 4 | | | | | | | | |
| DTB - DTW | 89 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|----------|--|
| 3 WELL
VOLUMES | 177 | WEATHER CONDITIONS:
<i>cloudy</i> |
| PURGE DATE | 12/21/22 | WATER APPEARANCE / ODOR:
<i>clear / no odor</i> |
| END OF
PURGE TIME | 1:00 | COMMENTS: |
| PURGE
AMOUNT | 177 | |
| DTW (FEET) | 42.10 | |

SAMPLING DATA

| | | |
|-------------|---------|--|
| SAMPLE DATE | 12/2/22 | WEATHER CONDITIONS:
<i>cloudy</i> |
| DTW (FEET) | 35.15 | WATER APPEARANCE / ODOR:
<i>clear / no odor</i> |
| SAMPLE TIME | 6:55 | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/12 ~~1ST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-16 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | 1:00 | 7.68 | 13.5 | 3.22 | 2050.00 | 1.56 | 0.60 | 42.4 |
| GAUGE TIME | | 1 | 1:05 | 7.65 | 13.8 | 3.10 | 2115.50 | 1.65 | 0.62 | 46.8 |
| DHC (FEET) | NA | 2 | 1:10 | 7.60 | 13.4 | 3.20 | 2345.50 | 1.70 | 0.64 | 44.4 |
| DTW (FEET) | 7.96 | 3 | | | | | | | | |
| DTB (FEET) | 46.45 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 115 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/21/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 1:10 | COMMENTS: | |
| PURGE
AMOUNT | 115 | | |
| DTW (FEET) | 10.78 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/21/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 7.98 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 11:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/12 - 1st QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|--------------------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|-----------|
| 0w-13 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (inv) |
| GAUGE DATE | 12/1/22 | Initial | 8:45 | 8.22 | 13.8 | 1.04 | 665.50 | 0.48 | 0.94 | 80.3 |
| GAUGE TIME | | 1 | 8:50 | 8.18 | 14.3 | 1.06 | 677.50 | 0.55 | 1.02 | 75.8 |
| DHC (FEET) | NA | 2 | 8:55 | 8.15 | 14.3 | 1.04 | 682.50 | 0.53 | 1.04 | 78.6 |
| DTW (FEET) | 21.88 | 3 | | | | | | | | |
| DTB (FEET) | 101.70 | 4 | | | | | | | | |
| DTB - DTW | 79.82 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4"
0.163 - 2" | 6 | | | | | | | | |

PURGING DATA

| | | |
|----------------------|-------|--|
| 3 WELL
VOLUMES | 156 | WEATHER CONDITIONS:
<i>Cloudy</i> |
| PURGE DATE | 12/27 | WATER APPEARANCE / ODOR:
<i>clear / no odor</i> |
| END OF
PURGE TIME | 8:55 | COMMENTS: |
| PURGE
AMOUNT | 156 | |
| DTW (FEET) | 75.07 | |

SAMPLING DATA

| | | |
|-------------|----------|--|
| SAMPLE DATE | 12/21/22 | WEATHER CONDITIONS:
<i>Cloudy</i> |
| DTW (FEET) | 72.00 | WATER APPEARANCE / ODOR:
<i>clear / no odor</i> |
| SAMPLE TIME | 9:00 | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/12 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| Aw-19 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 1:20 | 7.06 | 12.8 | 1.55 | 878.56 | 0.77 | 2.02 | 92.7 |
| GAUGE TIME | | 1 | 1:25 | 7.16 | 14.1 | 1.52 | 915.5 | 0.84 | 1.96 | 88.8 |
| DHC (FEET) | NA | 2 | 1:30 | 6.98 | 14.2 | 1.52 | 928.00 | 0.90 | 1.97 | 88.7 |
| DTW (FEET) | 25.16 | 3 | | | | | | | | |
| DTB (FEET) | 47.30 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 45 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/28/22 | WATER APPEARANCE / ODOR: | Clear / no odor |
| END OF
PURGE TIME | 1:30 | COMMENTS: | |
| PURGE
AMOUNT | 45 | | |
| DTW (FEET) | 25.58 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/29/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 22.65 | WATER APPEARANCE / ODOR: | Clear / no odor |
| SAMPLE TIME | 12:00 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/16 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|------------|------------------------|----------------------------|----------|
| 01W - 2936 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Specific Gravity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 8:40 | 7.16 | 12.8 | 1.78 | 1317.50 | 0.85 | 1.85 | 18.7 |
| GAUGE TIME | | 1 | 8:45 | 7.08 | 12.1 | 1.86 | 1274.00 | 0.86 | 2.05 | 26.8 |
| DHC (FEET) | NA | 2 | 8:50 | 7.12 | 12.4 | 1.83 | 1189.00 | 0.90 | 1.92 | 20.5 |
| DTW (FEET) | 22.65 | 3 | | | | | | | | |
| DTB (FEET) | 92.05 | 4 | | | | | | | | |
| DTB - DTW | 27.4 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 54 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/28/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 8:50 | COMMENTS: | |
| PURGE
AMOUNT | 22.55 | | |
| DTW (FEET) | 22.55 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/29/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 22.51 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 11:20 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY
FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 0CW-56 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 8:30 | 8.55 | 14.1 | 1.05 | 688.08 | 6.62 | 0.72 | 156.9 |
| GAUGE TIME | | 1 | 8:35 | 8.55 | 14.2 | 1.01 | 660.50 | 0.52 | 0.85 | 158.6 |
| DHC (FEET) | 16.02 | 2 | 8:40 | 8.52 | 13.8 | 1.03 | 650.56 | 0.48 | 0.86 | 148.6 |
| DTW (FEET) | 63:30 | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | 47.28 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 23 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 8:40 | COMMENTS: | |
| PURGE
AMOUNT | 23 | | |
| DTW (FEET) | 16.24 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/27/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 16.12 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 10:00 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 042-52 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 12:45 | 8.12 | 13.7 | 0.98 | 545.50 | 0.41 | 0.65 | 78.2 |
| GAUGE TIME | | 1 | 12:50 | 8.14 | 14.5 | 0.87 | 525.00 | 0.44 | 0.75 | 75.5 |
| DHC (FEET) | ND | 2 | 12:55 | 8.16 | 14.3 | 0.85 | 538.50 | 0.47 | 0.50 | 74.7 |
| DTW (FEET) | 15.15 | 3 | | | | | | | | |
| DTB (FEET) | 56.50 | 4 | | | | | | | | |
| DTB - DTW | 41.35 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|------------------------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 20.50 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/26/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 12:55 | COMMENTS: | |
| PURGE
AMOUNT | 20.50 20.50 | | |
| DTW (FEET) | 16.65 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/28/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 15.25 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 16:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

474

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|--------------------------|-----------------|------|----|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| OW-53 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | DRY | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4"
0.163 - 2" | 6 | | | | | | | | |

PURGING DATA

| | |
|----------------------|--------------------------|
| 3 WELL
VOLUMES | WEATHER CONDITIONS: |
| PURGE DATE | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | COMMENTS: |
| PURGE
AMOUNT | |
| DTW (FEET) | |

SAMPLING DATA

| | |
|-------------|--------------------------|
| SAMPLE DATE | WEATHER CONDITIONS: |
| DTW (FEET) | WATER APPEARANCE / ODOR: |
| SAMPLE TIME | COMMENTS: DRY |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|-----------------|--------------------------|----------------------|------------|--------------|----------------------------|----------|
| Qv-54 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Solids (ppt) | Dissolved
Oxygen (mg/L) | CAP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:15 | 6.98 | 13.5 | 1.58 | 12.58 | 0.80 | 0.95 | 78.5 |
| GAUGE TIME | | 1 | 2:20 | 7.08 | 13.7 | 1.68 | 132.50 | 0.84 | 1.30 | 78.5 |
| DHC (FEET) | NA | 2 | 2:25 | 7.12 | 13.4 | 1.72 | 1214.00 | 0.83 | 1.48 | 86.5 |
| DTW (FEET) | 19.13 | 3 | | 7.12 | | | | | | |
| DTB (FEET) | 29.75 | 4 | | | | | | | | |
| DTB - DTW | 10.62 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 5.25 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/26/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 2:25 | COMMENTS: | |
| PURGE
AMOUNT | 5.25 | | |
| DTW (FEET) | 19.72 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/27/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 19.06 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 11:45 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th ~~4th~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 000-55 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 3:30 | 6.98 | 14.4 | 1.77 | 124.50 | 0.79 | 0.86 | 775 |
| GAUGE TIME | | 1 | 3:35 | 7.02 | 14.2 | 1.64 | 1125.56 | 0.84 | 0.92 | 82.3 |
| DHC (FEET) | NA | 2 | 3:40 | 6.95 | 13.8 | 1.63 | 1095.54 | 0.83 | 0.95 | 86.5 |
| DTW (FEET) | 19.22 | 3 | | | | | | | | |
| DTB (FEET) | 30.20 | 4 | | | | | | | | |
| DTB - DTW | 10.98 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|---------|
| 3 WELL
VOLUMES | 5.5 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/26/22 | WATER APPEARANCE / ODOR: | Grayish |
| END OF
PURGE TIME | 3:40 | COMMENTS: | |
| PURGE
AMOUNT | 5.5 | | |
| DTW (FEET) | 19.17 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|---------|
| SAMPLE DATE | 12/27/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 20.12 | WATER APPEARANCE / ODOR: | Grayish |
| SAMPLE TIME | 12:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

9/2 ~~3RD~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|--------------------------|-----------------|------|------|--------------------------|----------------------|-----------|------------------------|----------------------------|----------|
| OW-56 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Specific Gravity (pcf) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/11/22 | Initial | 9:20 | 7.04 | 13.8 | 2.05 | 1578.5 | 1.04 | 1.74 | 32.5 |
| GAUGE TIME | | 1 | 9:25 | 7.13 | 14.1 | 2.08 | 1578.00 | 1.02 | 1.80 | 35.9 |
| DHC (FEET) | NA | 2 | 9:30 | 7.11 | 14.5 | 2.14 | 1555.50 | 1.06 | 1.82 | 78.7 |
| DTW (FEET) | 14.35 | 3 | | | | | | | | |
| DTB (FEET) | 18.60 | 4 | | | | | | | | |
| DTB - DTW | 4.25 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4"
0.163 - 2" | 6 | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|------------------------|
| 3 WELL
VOLUMES | 2.25 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/27/22 | WATER APPEARANCE / ODOR: | Clear / Slight HC odor |
| END OF
PURGE TIME | 9:30 | COMMENTS: | |
| PURGE
AMOUNT | 42.25 | | |
| DTW (FEET) | 17.75 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|------------------------|
| SAMPLE DATE | 12/28/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 17.26 | WATER APPEARANCE / ODOR: | Clear / Slight HC odor |
| SAMPLE TIME | 9:45 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

UPL

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 0W-57 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 11:05 | 6.86 | 13.0 | 1.35 | 877.50 | 0.68 | 0.77 | 63.2 |
| GAUGE TIME | | 1 | 11:30 | 6.68 | 12.9 | 1.35 | 877.50 | 0.68 | 0.68 | 68.0 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 22.93 | 3 | | | | | | | | |
| DTB (FEET) | 28.38 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|---------------------|
| 3 WELL
VOLUMES | 2.75 | WEATHER CONDITIONS: | Cloudy / Windy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Brown / slight odor |
| END OF
PURGE TIME | 11:30 | COMMENTS: | Purged Dry |
| PURGE
AMOUNT | 2.75 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|---|
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS: | Cloudy Windy |
| DTW (FEET) | 22.97 | WATER APPEARANCE / ODOR: | Brownish / slight H ₂ C odor |
| SAMPLE TIME | 11:05 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/7/22 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|--------------------------|-----------------|-------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| OUU-58 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mv) |
| GAUGE DATE | 12/11/22 | Initial | 10:25 | 6.92 | 13.1 | 1.83 | 1257.50 | 0.93 | 1.80 | 95.8 |
| GAUGE TIME | | 1 | 10:46 | 6.90 | 12.9 | 1.75 | 1235.00 | 0.90 | 1.90 | 90.5 |
| DHC (FEET) | NA | 2 | 10:49 | 6.88 | 13.2 | 1.85 | 1241.50 | 0.89 | 1.79 | 87.5 |
| DTW (FEET) | 26.05 | 3 | | | | | | | | |
| DTB (FEET) | 47.47 | 4 | | | | | | | | |
| DTB - DTW | 21.42 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4"
0.163 - 2" | 6 | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|------------------------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 10.56 | WEATHER CONDITIONS: | cloudy / windy |
| PURGE DATE | 12/13/22 | WATER APPEARANCE / ODOR: | clear / No odor |
| END OF
PURGE TIME | 10:45 | COMMENTS: | |
| PURGE
AMOUNT | 10.56 10.56 | | |
| DTW (FEET) | 25.98 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/14/22 | WEATHER CONDITIONS: | cloudy / windy |
| DTW (FEET) | 26.08 | WATER APPEARANCE / ODOR: | clear / No odor |
| SAMPLE TIME | 9:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

9/12 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 0w-59 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (P/L) | S. Inity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 10:15 | 7.51 | 14.3 | 11.30 | 7580.90 | 6.51 | 2.46 | 160.0 |
| GAUGE TIME | | 1 | 10:20 | 7.48 | 14.0 | 11.41 | 7470.00 | 6.46 | 2.45 | 141.8 |
| DHC (FEET) | N4 | 2 | 10:25 | 7.48 | 13.3 | 11.35 | 7473.90 | 6.46 | 2.40 | 143.5 |
| DTW (FEET) | 24.12 | 3 | | | | | | | | |
| DTB (FEET) | 38.60 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 7 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/27/22 | WATER APPEARANCE / ODOR: | Clear / no odor |
| END OF
PURGE TIME | 10:25 | COMMENTS: | |
| PURGE
AMOUNT | 7 | | |
| DTW (FEET) | 34.10 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/28/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 24.85 | WATER APPEARANCE / ODOR: | Clear / no odor |
| SAMPLE TIME | 10:10 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

474 ~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------------------|-----------------|--------------------------|----------------------|--------------------|-----------------|----------------------------|-----------------|
| OW-60 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Alinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 11:30 | 7.15 | 13.5 | 6.52 | 428.00 | 3.04 | 4.80 | 46.7 |
| GAUGE TIME | | 1 | 11:35 | 7.11 | 14.2 | 6.77 | 5785.36 | 3.05 | 4.62 | 24.7 |
| DHC (FEET) | NA | 2 | 11:40 | 7.12 | 13.7 | 6.77 | 5785.36 | 3.05 | 4.62 | 24.7 |
| DTW (FEET) | 17.03 | 3 | | | | | | | | |
| DTB (FEET) | 46.85 | 4 | | | | | | | | |
| DTB - DTW | 29.82 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------------------------|--------------------------|------------|
| 3 WELL
VOLUMES | 14.50 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/27/22 | WATER APPEARANCE / ODOR: | Brownish |
| END OF
PURGE TIME | 11:40
11:35 | COMMENTS: | Purged Day |
| PURGE
AMOUNT | 5.1 14.5 | | |
| DTW (FEET) | 17.03 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|----------|
| SAMPLE DATE | 12/28/20 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 34.85 | WATER APPEARANCE / ODOR: | Brownish |
| SAMPLE TIME | 11:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED

WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

~~FIRST~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 04W-63 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 3:30 | 6.68 | 17.2 | 1.57 | 1620.50 | 0.80 | 1.56 | 140.8 |
| GAUGE TIME | | 1 | 3:35 | 6.61 | 14.2 | 1.59 | 1627.00 | 0.88 | 1.66 | 148.1 |
| DHC (FEET) | NA | 2 | 3:40 | 6.62 | 13.2 | 1.62 | 1640.00 | 0.81 | 1.79 | 156.6 |
| DTW (FEET) | 23.02 | 3 | | | | | | | | |
| DTB (FEET) | 32.22 | 4 | | | | | | | | |
| DTB - DTW | 9.02 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 18 | WEATHER CONDITIONS: | Cloudy / Windy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 3:40 | COMMENTS: | |
| PURGE
AMOUNT | 18 | | |
| DTW (FEET) | 33.60 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 25.91 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 10:35 | COMMENTS: | PFAS |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 3 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/12 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| 000-0064 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 11:40 | 7.61 | 12.5 | 1.58 | 1027.00 | 0.80 | 2.11 | 33.8 |
| GAUGE TIME | | 1 | 11:55 | 7.62 | 13 | 1.58 | 1020.50 | 0.81 | 2.15 | 33.6 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 7.97 | 3 | | | | | | | | |
| DTB (FEET) | 24.30 | 4 | | | | | | | | |
| DTB - DTW | 16.33 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 32 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 8:00 | COMMENTS: | Purged Dry |
| PURGE
AMOUNT | 20.00 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 8.60 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 9:40 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCl |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/14 1ST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|--------------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|------------------------|----------------------------|----------|
| 600 - NAPTS-2 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Specific Gravity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 10:45 | 7.18 | 15.8 | 1.85 | 1145.50 | 1.08 | 0.92 | 80.5 |
| GAUGE TIME | | 1 | 10:55 | 7.19 | 15.6 | 1.85 | 1148.00 | 1.02 | 0.79 | 78.5 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 9.93 | 3 | | | | | | | | |
| DTB (FEET) | 14.65 | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 2.25 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/13/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 1:30 | COMMENTS: | Purged Dry |
| PURGE
AMOUNT | 2.00 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/14/22 | WEATHER CONDITIONS: | Sunny |
| DTW (FEET) | 10.11 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 10:45 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

476
FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|-----------|-----------------------|----------------------------|----------|
| NAPTS-3 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (ppL) | Specific Gravity (pp) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 2:25 | 7.16 | 16.0 | 1.38 | 815.50 | 0.68 | 1.15 | 94.7 |
| GAUGE TIME | | 1 | 2:30 | 7.17 | 15.2 | 1.40 | 833.50 | 0.71 | 1.19 | 92.5 |
| DHC (FEET) | NA | 2 | 2:35 | 7.19 | 15.8 | 1.40 | 830.00 | 0.72 | 1.20 | 98.5 |
| DTW (FEET) | 9.93 | 3 | | | | | | | | |
| DTB (FEET) | 14.65 | 4 | | | | | | | | |
| DTB - DTW | 4.72 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|--------------------------|
| 3 WELL
VOLUMES | 7 | WEATHER CONDITIONS: | |
| PURGE DATE | 12/13/22 | WATER APPEARANCE / ODOR: | Sunny
Clear / NO odor |
| END OF
PURGE TIME | 2:35 | COMMENTS: | |
| PURGE
AMOUNT | 7 | | |
| DTW (FEET) | 22.15 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|--------------------------|
| SAMPLE DATE | 12/14/22 | WEATHER CONDITIONS: | |
| DTW (FEET) | 9.92 | WATER APPEARANCE / ODOR: | Sunny
Clear / NO odor |
| SAMPLE TIME | 11:15 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINER | PRESERVATIVE |
|-----------|-------------------------|---------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|-------------------|------------|-----------------|-------|------|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| KA-3 | | Volumes | TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 11:20 | 7.28 | 15.6 | 2.19 | 1398.50 | 1.11 | 1.48 | 20.7 |
| GAUGE TIME | | 1 | 11:45 | 7.28 | 16.1 | 2.18 | 1411.50 | 1.15 | 1.56 | 26.8 |
| DHC (FEET) | NA | 2 | | | | | | | | |
| DTW (FEET) | 11.12 | 3 | | | | | | | | |
| DTB (FEET) | 31.65 | 4 | | | | | | | | |
| DTB - DTW | 20.53 | 5 | | | | | | | | |
| CAPACITY PER FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|-------------------|----------|--------------------------|-----------------|
| 3 WELL VOLUMES | 10 | WEATHER CONDITIONS: | Sunny |
| PURGE DATE | 12/13/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF PURGE TIME | 10:00 | COMMENTS: | Purged Dry |
| PURGE AMOUNT | 4 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/14/22 | WEATHER CONDITIONS: | Sunny |
| DTW (FEET) | 10.93 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 11:30 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th

FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| OW-12A | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mg) |
| GAUGE DATE | 12/1/22 | Initial | 3:06 | 6.56 | 13.7 | 4.39 | 28.57.50 | 2.36 | 11.09 | 286.6 |
| GAUGE TIME | | 1 | 3:09 | 6.56 | 14.0 | 4.44 | 2886.00 | 2.38 | 1.00 | 266.2 |
| DHC (FEET) | NA | 2 | 3:09 | 6.58 | 13.9 | 4.461 | 2886.50 | 2.38 | 0.90 | 257.1 |
| DTW (FEET) | 26.05 | 3 | | | | | | | | |
| DTB (FEET) | 33.20 | 4 | | | | | | | | |
| DTB - DTW | 7.15 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|--------------------------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 3.5 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 3:10
12:00 | COMMENTS: | |
| PURGE
AMOUNT | 3.5 | | |
| DTW (FEET) | 30.75 | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 30.12 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 10:05 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|-----------------------|----------------------------|----------|
| 06-66 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Specific Gravity (pH) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 12:00 | 6.88 | 14.41 | 2.10 | 1515.00 | 1.10 | 1.11 | 89.2 |
| GAUGE TIME | | 1 | 12:05 | 6.92 | 14.2 | 2.12 | 1498.50 | 1.12 | 1.05 | 96.5 |
| DHC (FEET) | N/A | 2 | 12:10 | 6.90 | 14.0 | 2.12 | 1485.00 | 1.12 | 1.02 | 91.5 |
| DTW (FEET) | 19.00 | 3 | | | | | | | | |
| DTB (FEET) | 27.75 | 4 | | | | | | | | |
| DTB - DTW | 8.75 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|------------------------|
| 3 WELL
VOLUMES | 4.5 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / Slight HC odor |
| END OF
PURGE TIME | 12:10 | COMMENTS: | |
| PURGE
AMOUNT | 4.5 | | |
| DTW (FEET) | 23.10 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|------------------------|
| SAMPLE DATE | 12/27/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 18.95 | WATER APPEARANCE / ODOR: | Clear / Slight HC odor |
| SAMPLE TIME | 12:05 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 3 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEXT |
| | 500 ML AMBER | 1 | NEXT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

4/22 ~~1/22~~ QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| OW-67 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | CRP (mv) |
| GAUGE DATE | 12/1/22 | Initial | 10:35 | 6.40 | 12.8 | 15.22 | 985.65 | 8.95 | 0.95 | 60.2 |
| GAUGE TIME | | 1 | 10:45 | 6.48 | 13.7 | 15.11 | 1005.50 | 9.03 | 1.02 | 58.2 |
| DHC (FEET) | NA | 2 | 10:30 | 6.51 | 12.9 | 15.32 | 1612.00 | 9.18 | 1.05 | 61.5 |
| DTW (FEET) | 12.76 | 3 | | | | | | | | |
| DTB (FEET) | 27.45 | 4 | | | | | | | | |
| DTB - DTW | 14.75 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.853 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 7.25 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/27/22 | WATER APPEARANCE / ODOR: | Brown / No odor |
| END OF
PURGE TIME | 10:50 | COMMENTS: | |
| PURGE
AMOUNT | 7.25 | | |
| DTW (FEET) | 26.50 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|--------------------|
| SAMPLE DATE | 12/28/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 12.15 | WATER APPEARANCE / ODOR: | Brownish / No odor |
| SAMPLE TIME | 10:20 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY:

SIGNATURE

MARATHON GALLUP REFINERY

4th QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|------------|----------------|----------------------------|----------|
| GW-68 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mV) |
| GAUGE DATE | 12/1/22 | Initial | 11:20 | 6.70 | 13.6 | 12.65 | 8375.50 | 7.12 | 0.95 | 63.5 |
| GAUGE TIME | | 1 | 11:25 | 6.75 | 13.95 | 12.77 | 8250.00 | 7.25 | 1.44 | 70.5 |
| DHC (FEET) | NA | 2 | 11:30 | 6.80 | 14.1 | 12.70 | 8254.00 | 7.26 | 1.46 | 79.3 |
| DTW (FEET) | 18.66 | 3 | | | | | | | | |
| DTB (FEET) | 28.20 | 4 | | | | | | | | |
| DTB - DTW | 9.54 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4' | 6 | | | | | | | | |
| | 0.163 - 2' | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 4.75 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/27/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 11:30 | COMMENTS: | |
| PURGE
AMOUNT | 4.75 | | |
| DTW (FEET) | 16.15 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|-----------------|
| SAMPLE DATE | 12/28/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 14.55 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 11:00 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINER | PRESERVATIVE |
|-----------|-------------------------|---------------------|---|
| | 40 ML VOA | 5 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

| | |
|------------------|---------------------|
| INSTRUMENTS USED | WATER QUALITY METER |
|------------------|---------------------|

COMPLETED BY:

SIGNATURE:

MARATHON GALLUP REFINERY

9/12 FIRST QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|------------------------|----------------------------|----------|
| OU-70 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Specific Gravity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/11/22 | Initial | 11:05 | 8.08 | 13.9 | 1.12 | 856.50 | 0.60 | 0.85 | 171.5 |
| GAUGE TIME | | 1 | 11:10 | 8.07 | 12.8 | 1.13 | 860.2 | 0.58 | 0.87 | 168.3 |
| DHC (FEET) | NA | 2 | 11:15 | 8.08 | 13.2 | 1.10 | 869.5 | 0.61 | 0.85 | 166.5 |
| DTW (FEET) | 31.95 | 3 | | | | | | 0.65 | 0.81 | |
| DTB (FEET) | 47.70 | 4 | | | | | | | | |
| DTB - DTW | 15.78 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|----------|--------------------------|--------------------|
| 3 WELL
VOLUMES | 7.5 | WEATHER CONDITIONS: | Cloudy / Windy |
| PURGE DATE | 12/13/22 | WATER APPEARANCE / ODOR: | Brownish / No odor |
| END OF
PURGE TIME | 11:15 | COMMENTS: | |
| PURGE
AMOUNT | 7.5 | | |
| DTW (FEET) | 33.80 | | |

SAMPLING DATA

| | | | |
|-------------|----------|--------------------------|--------------------|
| SAMPLE DATE | 12/14/22 | WEATHER CONDITIONS: | Sunny Windy |
| DTW (FEET) | 33.15 | WATER APPEARANCE / ODOR: | Brownish / No odor |
| SAMPLE TIME | 10:25 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | Na ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED

WATER QUALITY METER

COMPLETED BY:

SIGNATURE:

SIGNATURE:

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

4th

SECOND QUARTER 2021

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|---|----------------------|------|----|--------------------------|---|-----------|----------------|----------------------------|----------|
| EP-6 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 6/2/21 | Initial: | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.74 - 4"
0.163 - 2" | 6 | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | WEATHER CONDITIONS: | | | | | | | | | |
| PURGE DATE | WATER APPEARANCE / ODOR: | | | | | | | | | |
| END OF
PURGE TIME | COMMENTS: | | | | | | | | | |
| PURGE
AMOUNT | Could not get samples due to
Pond being Frozen | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | WEATHER CONDITIONS: | | | | | | | | | |
| DTW (FEET) | WATER APPEARANCE / ODOR: | | | | | | | | | |
| SAMPLE TIME | COMMENTS: | | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | | | | PRESERVATIVE | | | | |
| | 40 ML VOA | 5 | | | | HCL | | | | |
| | 40 ML VOA | 3 | | | | NA ₂ S ₂ O ₃ | | | | |
| | 1 LITER AMBER | | | | | NEAT | | | | |
| | 250 ML AMBER | 1 | | | | NEAT | | | | |
| | 250 ML PLASTIC | 1 | | | | HNO ₃ | | | | |
| | 125 ML PLASTIC | 1 | | | | HNO ₃ | | | | |
| | 125 ML PLASTIC | 1 | | | | H ₂ SO ₄ | | | | |
| | 125 ML PLASTIC | 1 | | | | NEAT | | | | |
| INSTRUMENTS USED | OIL / WATER INTERFACE PROBE | | | | | | | | | |
| | WATER QUALITY METER | | | | | | | | | |

COMPLETED BY:

SIGNATURE:

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

4/6 2020 QUARTER 2020 2

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|-------------------------|-----------------------------|----------------------|----|--------------------------|----------------------|---|----------------|----------------------------|----------|
| Oil Sample 694 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 10/1/12 | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.74 - 4"
0.163 - 2" | 6 | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | | | | | | | | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | | | | | | | | |
| END OF
PURGE TIME | | COMMENTS: | | | | | | | | |
| PURGE
AMOUNT | | Never Sampled | | | | | | | | |
| DTW (FEET) | | Did not Sample | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | | WEATHER CONDITIONS: | | | | | | | | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | | | | | | | | |
| SAMPLE TIME | | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | | | PRESERVATIVE | | | |
| | | 40 ML VOA | 5 | | | | HCL | | | |
| | | 40 ML VOA | 3 | | | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | | | | | NEAT | | | |
| | | 250 ML AMBER | 1 | | | | NEAT | | | |
| | | 250 ML PLASTIC | 1 | | | | HNO ₃ | | | |
| | | 125 ML PLASTIC | 1 | | | | HNO ₃ | | | |
| | | 125 ML PLASTIC | 1 | | | | H ₂ SO ₄ | | | |
| | | 125 ML PLASTIC | 1 | | | | NEAT | | | |
| INSTRUMENTS USED | | OIL / WATER INTERFACE PROBE | | | | | | | | |
| | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY:

SIGNATURE:

474

ROLEUM COMPANY - GALLUP REFINERY
~~SECOND~~ QUARTER 2021

Received by OCD: 4/20/2023 10:38:19 AM

BW-5B
 GAUGE DATE 12/4/21
 GAUGE TIME
 DHO (FEET) N.A.
 DTW (FEET) 10.30
 DTB (FEET) 54.35
 DTB - DTW 44.05
 CAPACITY PER FOOT 0.74 - 4"
 FCOT 0.163 - 2"

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 1:20 | | | | | | | |
| 1:30 | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

PURGING DATA

3 WELL
 VOLUMES 21.50
 PURGE DATE 12/21
 END OF
 PURGE TIME 1:30
 PURGE
 AMOUNT 9.5
 DTW (FEET) DRY

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

Cloudy / Windy

Clear no odor

Purged Day

SAMPLING DATA

SAMPLE DATE 12/22
 DTW (FEET) 10.30
 SAMPLE TIME 10:00

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

Cloudy / Windy

No odor

SAMPLE LOG

| SAMPLE TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|------------------|-----------------------|---|
| 100 ML VOA | 5 | HCL |
| 40 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 150 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| INSTRUMENTS USED | WATER INTERFACE PROBE | |
| | QUALITY METER | |

SIGNATURE: _____

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BLW-5C
 GAUGE DATE 12/4/22
 GAUGE TIME
 DHC (FEET) N/A
 DTW (FEET) 11.08
 DTB (FEET) 69.68
 DTB - DTW 69.57
 CAPACITY PER FOOT 0.74 ft³
 FOOT 0.668 - 2

TEST PARAMETERS

| TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|------|----|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

PURGING DATA

3 WELL
 VOLUMES 32.00
 PURGE DATE 12/21/22
 END OF PURGE TIME 2:15
 PURGE AMOUNT 32.00
 DTW (FEET) 5.05

WELL HEAD CONDITIONS:

APPEARANCE / ODOR: Cloudy / Windy
 Brown / No odor

SAMPLING DATA

SAMPLE DATE 12/27/22
 DTW (FEET) 4.20
 SAMPLE TIME 10:00

WELL HEAD CONDITIONS:

APPEARANCE / ODOR: Cloudy / Windy
 Brown / No odor

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|--------------------|----------------------|---|
| 5 LITER VOA | 5 | HCL |
| 100 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 250 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| INTERFERENCE PROBE | | |
| QUALITY METER | | |

SIGNATURE: _____

OPI5-1

GAUGE DATE
GAUGE TIME
DHC (FEET) N.A.
DTW (FEET) 12.35
DTB (FEET) 27.95
DTB - DTW 15.60
CAPACITY PER FOOT 0.174 - 1"
FOOT 0.163 - 2"

TEST PARAMETERS

| TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|-------|------|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| 11:10 | 7.46 | 13.8 | 4.77 | 2861.50 | 2.50 | 1.60 | 147.6 |
| 11:20 | 7.38 | 14.0 | 4.80 | 2760.50 | 2.45 | 2.03 | 136.5 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

PURGING DATA

3 WELL
VOLUMES 7.5
PURGE DATE 12/14
END OF
PURGE TIME 10:45
PURGE
AMOUNT 6.5
DTW (FEET) Dry

WATER CONDITIONS:

WATER APPEARANCE / ODOR:

TASTES:

cloudy

Yellowish / No odor

Purged Dry

SAMPLING DATA

SAMPLE DATE 12/15
DTW (FEET) 22.36
SAMPLE TIME 11:10

WATER CONDITIONS:

WATER APPEARANCE / ODOR:

TASTES:

cloudy

Yellowish No odor

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|--------------------|----------------------|---|
| 50 ML VOA | 5 | HCL |
| 50 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 50 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| INTERFERENCE PROBE | | |
| QUALITY METER | | |

COMP

SIGNATURE:

OW-11
 GAUGE DATE 12/4/22
 GAUGE TIME
 DHC (FEET) 18.87
 DTW (FEET) 18.98
 DTB (FEET)
 DTB - DTW
 CAPACITY FEET 0.74 - 1"
 FOOT 0.168 - 2"

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |

PURGING DATA

3 WELL
 VOLUMES

PURGE DATE

END OF
 PURGE TIME

PURGE
 AMOUNT

DTW (FEET)

WATER CONDITIONS:

APPEARANCE / ODOR:

CONTENTS:

HAS Product

SAMPLING DATA

SAMPLE DATE

DTW (FEET)

SAMPLE TIME

WATER CONDITIONS:

APPEARANCE / ODOR:

CONTENTS:

SAMPLE LOG

| SAMPLE TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|--------------------|----------------------|---|
| 1 LITER VOA | 5 | HCL |
| 10 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 150 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| INS. RUMBLE IS. EI | | AIR INTERFACE PROBE |
| | | QUALITY METER |

SIGNATURE:

TEST PARAMETERS

| GAUGE DATE | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 06-29 | 11:15 | 7.08 | 14.2 | 1.66 | 1136.58 | 0.83 | 0.66 | -2.5 |
| GAUGE TIME | 11:25 | 7.09 | 14.3 | 1.63 | 1080.00 | 0.80 | 0.83 | -1.8 |
| DHC (FEET) | | | | | | | | |
| DTW (FEET) | | | | | | | | |
| DTB (FEET) | | | | | | | | |
| DTB - DTW | | | | | | | | |
| CAPACITANCE | | | | | | | | |
| FOOT | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|------------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 12/16/5.50 | WATER CONDITIONS: | Cloudy |
| PURGE DATE | 12/24 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 10.06 | WATER ENTRY | Purged Dry |
| PURGE
AMOUNT | 23.06 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|-------|--------------------------|------------------|
| SAMPLE DATE | 12/27 | WATER CONDITIONS: | Clear / No odor |
| DTW (FEET) | 18.45 | WATER APPEARANCE / ODOR: | Purged Dry Sunny |
| SAMPLE TIME | 11:15 | | |

SAMPLE LOG

| SAMPLE TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------------|----------------------|---|
| 1 LITER VOA | 5 | HCL |
| 500 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 250 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| DATA INTERFACE PROBE | | |
| QUALITY METER | | |

SIGNATURE: _____

STP1-NW

GAUGE DATE 12/14/22

GAUGE TIME

DHC (FEET) NA

DTW (FEET) 20.75

DTB (FEET) 49.56

DTB - DTW

CAPACITYPE 0.74 4"

FCOT 0.163 - 2"

TEST PARAMETERS

| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| 12:20 | 7.65 | 14.3 | 6.36 | 4153.48 | 3.2 | 4.77 | 86.9 |
| 12:25 | 7.60 | 14.6 | 6.21 | 4112.58 | 3.3 | 4.69 | 76.4 |
| 12:30 | 7.61 | 13.8 | 6.20 | 4098.00 | 3.3 | 4.68 | 73.2 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

PURGING DATA

3 WELL
VOLUMES 14

PURGE DATE 12/14

END OF
PURGE TIME 12:30

PURGE
AMOUNT 14

DTW (FEET) 43.51

WELLER CONDITIONS:

Cloudy / Windy

WATER APPEARANCE / ODOR: Clear / No odor

REMARKS:

SAMPLING DATA

SAMPLE DATE 12/15

DTW (FEET) 46.56

SAMPLE TIME 16:30

WELLER CONDITIONS:

Cloudy / ~~No odor~~ - Windy

WATER APPEARANCE / ODOR: Clear / No odor

REMARKS:

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|------------------|----------------------|---|
| 500 ML VOA | 5 | HCL |
| 400 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 150 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| INSTRUMENTS USED | AIR INTERFACE PROBE | |
| | QUALITY METER | |

SIGNATURE: _____

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

4th QUARTER 2021 7

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| STP1-SW | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.74 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|--|--------------------------|-----|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: | |
| PURGE DATE | | WATER APPEARANCE / ODOR: | |
| END OF
PURGE TIME | | COMMENTS: | DRY |
| PURGE
AMOUNT | | | |
| DTW (FEET) | | | |

SAMPLING DATA

| | | | |
|-------------|--|--------------------------|--|
| SAMPLE DATE | | WEATHER CONDITIONS: | |
| DTW (FEET) | | WATER APPEARANCE / ODOR: | |
| SAMPLE TIME | | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|------------------|-----------------------------|----------------------|---|
| | 40 ML VOA | 5 | HCL |
| | 40 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | | NEAT |
| | 250 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| | 125 ML PLASTIC | 1 | NEAT |
| INSTRUMENTS USED | OIL / WATER INTERFACE PROBE | | |
| | WATER QUALITY METER | | |

COMPLETED BY:

SIGNATURE:

Ph-3

GAUGE DATE
GAUGE TIME
DHC (FEET)
DTW (FEET)
DTB (FEET)
DTB - DTW
CAPACITY PER FOOT
0.74 - 3"
0.163 - 2"

TEST PARAMETERS

| TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|-------|------|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| 10:35 | 7.23 | 16.4 | 1.20 | 800.56 | 6.55 | 2.86 | 106.3 |
| 10:40 | 7.20 | 16.2 | 1.18 | 765.50 | 6.54 | 2.83 | 102.4 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

PURGING DATA

3 WELL VOLUMES
PURGE DATE
END OF PURGE TIME
PURGE AMOUNT
DTW (FEET)

WATER CONDITIONS:
WATER APPEARANCE / ODOR:
COMMENTS:

SAMPLING DATA

SAMPLE DATE 12/6
DTW (FEET)
SAMPLE TIME 10:35

WATER CONDITIONS: Cloudy / Windy
WATER APPEARANCE / ODOR: Clear / No odor
COMMENTS:

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------|----------------------|---|
| 500 ML VOA | 5 | HCL |
| 40 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 450 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |

NSI RUMPTIS PROBE
AIR INTERFACE PROBE
QUALITY METER

SIGNATURE:

PW-4

GAUGE DATE
 GAUGE TIME
 DHC (FEET)
 DTW (FEET)
 DTB (FEET)
 DTB - DTW
 CAPACITY (GAL)
 ECOT (0.163 - 2)

TEST PARAMETERS

| TIME | pH | Temperature Degrees C | Conductivity (mS) | TDS (g/L) | Salinity (ppt) | Dissolved Oxygen (mg/L) | ORP (mv) |
|------|----|-----------------------|-------------------|-----------|----------------|-------------------------|----------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |

PURGING DATA

3 WELL
 VOLUMES
 PURGE DATE
 END OF
 PURGE TIME
 PURGE
 AMOUNT
 DTW (FEET)

WATER CONDITIONS:

APPEARANCE / ODOR:

REMARKS:

WAS Told Not to get PW-4
 Sampled

SAMPLING DATA

WATER CONDITIONS:

APPEARANCE / ODOR:

REMARKS:

SAMPLE LOG

SAMPLE DATE
 DTW (FEET)
 SAMPLE TIME
 SAMPLE

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------|----------------------|---|
| 5 LITER VOA | 5 | HCL |
| 10 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 250 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |

INSTRUMENTS

AUT INTERFACE PROBE
 QUALITY METER

CO AP

SIGNATURE:

EAST LDU

GAUGE DATE
GAUGE TIME
DHC (FEET)
DTW (FEET)
DTB (FEET)
DTB - DTW
CAPACITY PER FOOT
FOOT

| TEST PARAMETERS | | | | | | | | |
|-----------------|----|--------------------------|----------------------|-----------|----------------|----------------------------|----------|--|
| TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |

PURGING DATA

3 WELL
VOLUMES
PURGE DATE
END OF
PURGE TIME
PURGE
AMOUNT
DTW (FEET)

WATER CONDITIONS:
WATER APPEARANCE / ODOR:
WATER TEMPERATURE:
WATER pH:

SAMPLING DATA

SAMPLE DATE
DTW (FEET)
SAMPLE TIME

WATER CONDITIONS:
WATER APPEARANCE / ODOR:
WATER TEMPERATURE:
WATER pH:

SAMPLE LOG

| CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|----------------------|----------------------|---|
| 5 ML VOA | 5 | HCL |
| 10 ML VOA | 3 | NA ₂ S ₂ O ₃ |
| 1 LITER AMBER | | NEAT |
| 50 ML AMBER | 1 | NEAT |
| 250 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | HNO ₃ |
| 125 ML PLASTIC | 1 | H ₂ SO ₄ |
| 125 ML PLASTIC | 1 | NEAT |
| AIR/ INTERFACE PROBE | | |
| QUALITY METER | | |

SIGNATURE:

MARATHON PETROLEUM COMPANY - GALLUP REFINERY

C7H-3RD QUARTER 2021 20

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|--------------------------|---|----------------------|----|--------------------------|----------------------|---|----------------|----------------------------|----------|
| WEST-CDU | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | | Initial | | | | | | | | |
| GAUGE TIME | | 1 | | | | | | | | |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.74 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |
| PURGING DATA | | | | | | | | | | |
| 3 WELL
VOLUMES | WEATHER CONDITIONS: | | | | | | | | | |
| PURGE DATE | WATER APPEARANCE / ODOR: | | | | | | | | | |
| END OF
PURGE TIME | COMMENTS: | | | | | | | | | |
| PURGE
AMOUNT | | | | | | | | | | |
| DTW (FEET) | | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | | |
| SAMPLE DATE | 12/6 | WEATHER CONDITIONS:
cloudy / windy | | | | | | | | |
| DTW (FEET) | 1.26 | WATER APPEARANCE / ODOR:
clear / no odor | | | | | | | | |
| SAMPLE TIME | 11:00 | COMMENTS: | | | | | | | | |
| SAMPLE LOG | | | | | | | | | | |
| SAMPLE ID | TYPE | CONTAINER TYPE | NUMBER OF CONTAINERS | | | | PRESERVATIVE | | | |
| | | 40 ML VOA | 5 | | | | HCL | | | |
| | | 40 ML VOA | 3 | | | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | | | | | NEAT | | | |
| | | 250 ML AMBER | 1 | | | | NEAT | | | |
| | | 250 ML PLASTIC | 1 | | | | HNO ₃ | | | |
| | | 125 ML PLASTIC | 1 | | | | HNO ₃ | | | |
| | | 125 ML PLASTIC | 1 | | | | H ₂ SO ₄ | | | |
| | | 125 ML PLASTIC | 1 | | | | NEAT | | | |
| INSTRUMENTS USED | | OIL / WATER INTERFACE PROBE | | | | | | | | |
| | | WATER QUALITY METER | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

CPL ~~SECOND~~ QUARTER 2022

| POND ID | SAMPLE DATE | SAMPLE TIME |
|---------|-------------|-------------|
| EP-3 | | |

| SAMPLING DATA | | | | | | | | |
|---------------|-----------------|----|--------------------------|-------------------------|------------|----------------|----------------------------|----------|
| 12/29 | TEST PARAMETERS | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR: DRY

COMMENTS:

| SAMPLE LOG | | | |
|------------|-------------------------|----------------------|---|
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
| EP-3 | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |
| | 1 LITER PLASTIC | 1 | NEAT |
| | 500 ML PLASTIC | 1 | NA ₂ SO ₃ |
| | 100 ML PLASTIC | 1 | NEAT |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~3RD~~ QUARTER 2022

| POND ID | SAMPLE DATE | SAMPLE TIME |
|---------|-------------|-------------|
| EP-4 | | |

| SAMPLING DATA | | | | | | | | |
|--------------------------|-------------------------|----------------------|---|-------------------------|------------|----------------|----------------------------|----------|
| 12/29 | TEST PARAMETERS | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |
| WEATHER CONDITIONS: | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | |
| COMMENTS:
DRX | | | | | | | | |
| | | | | | | | | |
| SAMPLE LOG | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE | | | | | |
| EP-4 | 40 ML VOA | 6 | HCL | | | | | |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ | | | | | |
| | 1 LITER AMBER | 2 | NEAT | | | | | |
| | 500 ML AMBER | 1 | NEAT | | | | | |
| | 250 ML PLASTIC | 1 | HNO ₃ | | | | | |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ | | | | | |
| | 500 ML PLASTIC | 1 | NaOH | | | | | |
| | 1 LITER PLASTIC | 1 | NEAT | | | | | |
| | 500 ML PLASTIC | 1 | NA ₂ SO ₃ | | | | | |
| | 100 ML PLASTIC | 1 | NEAT | | | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~SECOND~~ QUARTER 2022

| | | |
|---------|-------------|-------------|
| POND ID | SAMPLE DATE | SAMPLE TIME |
| EP-5 | | |

SAMPLING DATA

| | | | | | | | | |
|-------|-----------------|----|--------------------------|-------------------------|------------|----------------|----------------------------|----------|
| 12/29 | TEST PARAMETERS | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS: DRY

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| EP-5 | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |
| | 1 LITER PLASTIC | 1 | NEAT |
| | 500 ML PLASTIC | 1 | NA ₂ SO ₃ |
| | 100 ML PLASTIC | 1 | NEAT |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

9th ~~SECOND~~ QUARTER 2022

| | | | | | | | | | |
|--------------------------|-----------------|-------------------------|--------------------------|-------------------------|------------|---|----------------------------|----------|--|
| POND ID | | SAMPLE DATE | | SAMPLE TIME | | | | | |
| EP-7 | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | |
| 12/29 | TEST PARAMETERS | | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | |
| | | | | | | | | | |
| WEATHER CONDITIONS: | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| COMMENTS: DRY | | | | | | | | | |
| | | | | | | | | | |
| SAMPLE LOG | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | | NUMBER OF CONTAINERS | | PRESERVATIVE | | | |
| EP-7 | | 40 ML VOA | | 6 | | HCL | | | |
| | | 40 ML VOA | | 2 | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | | 2 | | NEAT | | | |
| | | 500 ML AMBER | | 1 | | NEAT | | | |
| | | 250 ML PLASTIC | | 1 | | HNO ₃ | | | |
| | | 125 ML PLASTIC FILTERED | | 1 | | HNO ₃ | | | |
| | | 500 ML PLASTIC | | 1 | | NaOH | | | |
| | | 1 LITER PLASTIC | | 1 | | NEAT | | | |
| | | 500 ML PLASTIC | | 1 | | NA ₂ SO ₃ | | | |
| | | 100 ML PLASTIC | | 1 | | NEAT | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

CPS ~~SECOND~~ QUARTER 2022

| POND ID | SAMPLE DATE | SAMPLE TIME |
|---------|-------------|-------------|
| EP-8 | | |

SAMPLING DATA

| 12/29 | TEST PARAMETERS | | | | | | | |
|-------|-----------------|----|--------------------------|-------------------------|------------|----------------|----------------------------|----------|
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |

WEATHER CONDITIONS:

WATER APPEARANCE / ODOR:

COMMENTS:

DRY

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| EP-8 | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |
| | 1 LITER PLASTIC | 1 | NEAT |
| | 500 ML PLASTIC | 1 | NA ₂ SO ₃ |
| | 100 ML PLASTIC | 1 | NEAT |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

4th ~~SECOND~~ QUARTER 2022

| | | | | | | | | | |
|--------------------------|-----------------|-------------------------|--------------------------|-------------------------|------------|---|----------------------------|----------|--|
| POND ID | | SAMPLE DATE | | SAMPLE TIME | | | | | |
| EP-9 | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | |
| 12/29 | TEST PARAMETERS | | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | |
| | | | | | | | | | |
| WEATHER CONDITIONS: | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| COMMENTS: DRY | | | | | | | | | |
| | | | | | | | | | |
| SAMPLE LOG | | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | | NUMBER OF CONTAINERS | | PRESERVATIVE | | | |
| EP-9 | | 40 ML VOA | | 6 | | HCL | | | |
| | | 40 ML VOA | | 2 | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | | 2 | | NEAT | | | |
| | | 500 ML AMBER | | 1 | | NEAT | | | |
| | | 250 ML PLASTIC | | 1 | | HNO ₃ | | | |
| | | 125 ML PLASTIC FILTERED | | 1 | | HNO ₃ | | | |
| | | 500 ML PLASTIC | | 1 | | NaOH | | | |
| | | 1 LITER PLASTIC | | 1 | | NEAT | | | |
| | | 500 ML PLASTIC | | 1 | | NA ₂ SO ₃ | | | |
| | | 100 ML PLASTIC | | 1 | | NEAT | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

9th ~~SECOND~~ QUARTER 2022

| | | | | | | | | |
|--------------------------|-----------------|-------------------------|--------------------------|-------------------------|---|----------------|----------------------------|----------|
| POND ID | | SAMPLE DATE | | SAMPLE TIME | | | | |
| EP-11 | | | | | | | | |
| SAMPLING DATA | | | | | | | | |
| 12/29 | TEST PARAMETERS | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| | | | | | | | | |
| WEATHER CONDITIONS: | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | |
| COMMENTS: DRX | | | | | | | | |
| | | | | | | | | |
| SAMPLE LOG | | | | | | | | |
| SAMPLE ID | | CONTAINER TYPE | NUMBER OF CONTAINERS | | PRESERVATIVE | | | |
| EP-11 | | 40 ML VOA | 6 | | HCL | | | |
| | | 40 ML VOA | 2 | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | 2 | | NEAT | | | |
| | | 500 ML AMBER | 1 | | NEAT | | | |
| | | 250 ML PLASTIC | 1 | | HNO ₃ | | | |
| | | 125 ML PLASTIC FILTERED | 1 | | HNO ₃ | | | |
| | | 500 ML PLASTIC | 1 | | NaOH | | | |
| | | 1 LITER PLASTIC | 1 | | NEAT | | | |
| | | 500 ML PLASTIC | 1 | | NA ₂ SO ₃ | | | |
| | | 100 ML PLASTIC | 1 | | NEAT | | | |
| INSTRUMENTS USED | | WATER QUALITY METER | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

C/24 ~~3RD~~ QUARTER 2022

| | | | | | | | | | |
|--------------------------|-----------------|-------------------------|--------------------------|-------------------------|------------|---|----------------------------|----------|--|
| POND ID | | SAMPLE DATE | | SAMPLE TIME | | | | | |
| EP-12A | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | |
| 12/29 | TEST PARAMETERS | | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) | |
| | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| COMMENTS: DRX | | | | | | | | | |
| | | | | | | | | | |
| SAMPLE LOG | | | | | | | | | |
| SAMPLE ID | TIME | CONTAINER TYPE | | NUMBER OF CONTAINERS | | PRESERVATIVE | | | |
| SAMPLE ID | | CONTAINER TYPE | | NUMBER OF CONTAINERS | | PRESERVATIVE | | | |
| EP-12A | | 40 ML VOA | | 6 | | HCL | | | |
| | | 40 ML VOA | | 2 | | NA ₂ S ₂ O ₃ | | | |
| | | 1 LITER AMBER | | 2 | | NEAT | | | |
| | | 500 ML AMBER | | 1 | | NEAT | | | |
| | | 250 ML PLASTIC | | 1 | | HNO ₃ | | | |
| | | 125 ML PLASTIC FILTERED | | 1 | | HNO ₃ | | | |
| | | 500 ML PLASTIC | | 1 | | NaOH | | | |
| | | 1 LITER PLASTIC | | 1 | | NEAT | | | |
| | | 500 ML PLASTIC | | 1 | | NA ₂ SO ₃ | | | |
| | | 100 ML PLASTIC | | 1 | | NEAT | | | |
| WATER QUALITY METER | | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

c/fm

SECOND QUARTER 2022

| POND ID | SAMPLE DATE | SAMPLE TIME | | | | | | | |
|--------------------------------------|-------------------------|-------------|--------------------------|-------------------------|---|----------------|----------------------------|--|----------|
| EP-12B | | | | | | | | | |
| SAMPLING DATA | | | | | | | | | |
| 12/29 | TEST PARAMETERS | | | | | | | | |
| | TIME | pH | Temperature
Degrees C | Conductivity
(mS/cm) | TDS (mg/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | | ORP (mv) |
| | | | | | | | | | |
| WEATHER CONDITIONS: | | | | | | | | | |
| WATER APPEARANCE / ODOR: | | | | | | | | | |
| COMMENTS: DRX | | | | | | | | | |
| | | | | | | | | | |
| SAMPLE LOG | | | | | | | | | |
| SAMPLE ID | CONTAINER TYPE | | NUMBER OF CONTAINERS | | PRESERVATIVE | | | | |
| EP-12B | 40 ML VOA | | 6 | | HCL | | | | |
| | 40 ML VOA | | 2 | | NA ₂ S ₂ O ₃ | | | | |
| | 1 LITER AMBER | | 2 | | NEAT | | | | |
| | 500 ML AMBER | | 1 | | NEAT | | | | |
| | 250 ML PLASTIC | | 1 | | HNO ₃ | | | | |
| | 125 ML PLASTIC FILTERED | | 1 | | HNO ₃ | | | | |
| | 500 ML PLASTIC | | 1 | | NaOH | | | | |
| | 1 LITER PLASTIC | | 1 | | NEAT | | | | |
| | 500 ML PLASTIC | | 1 | | NA ₂ SO ₃ | | | | |
| | 100 ML PLASTIC | | 1 | | NEAT | | | | |
| INSTRUMENTS USED WATER QUALITY METER | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

Forth QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| OW-12 | | | | | | | | | | |
| GAUGE DATE | 12/3/22 | Initial | 10:05 | 9.05 | 12.9 | 0.97 | 630.50 | 0.48 | 0.91 | 9.6 |
| GAUGE TIME | | 1 | 16:15 | 9.16 | 12.7 | 0.97 | 630.50 | 0.49 | 0.85 | 8.5 |
| DHC (FEET) | ND | 2 | | | | | | | | |
| DTW (FEET) | 47.65 | 3 | | | | | | | | |
| DTB (FEET) | 124.70 | 4 | | | | | | | | |
| DTB - DTW | 77.65 | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | | |
|----------------------|---------|--------------------------|-----------------|
| 3 WELL
VOLUMES | 152.00 | WEATHER CONDITIONS: | Cloudy |
| PURGE DATE | 12/6/22 | WATER APPEARANCE / ODOR: | Clear / No odor |
| END OF
PURGE TIME | 3:45 | COMMENTS: | Purged Dry |
| PURGE
AMOUNT | 22.00 | | |
| DTW (FEET) | DRY | | |

SAMPLING DATA

| | | | |
|-------------|---------|--------------------------|-----------------|
| SAMPLE DATE | 12/7/22 | WEATHER CONDITIONS: | Cloudy |
| DTW (FEET) | 55.60 | WATER APPEARANCE / ODOR: | Clear / No odor |
| SAMPLE TIME | 16:05 | COMMENTS: | |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____

MARATHON GALLUP REFINERY

FATH QUARTER 2022

| WELL ID | | TEST PARAMETERS | | | | | | | | |
|----------------------|------------|-----------------|-------|------|--------------------------|----------------------|-----------|----------------|----------------------------|----------|
| STP-1 to EP-2 | | Volumes | TIME | pH | Temperature
Degrees C | Conductivity
(mS) | TDS (g/L) | Salinity (ppt) | Dissolved
Oxygen (mg/L) | ORP (mv) |
| GAUGE DATE | 12/30/22 | Initial | 11:05 | 7.81 | 14.3 | 0.418 | 198.56 | 0.16 | 6.03 | 83.5 |
| GAUGE TIME | | 1 | 11:15 | 7.80 | 14.2 | 0.420 | 262.00 | 0.11 | 5.93 | 84.2 |
| DHC (FEET) | | 2 | | | | | | | | |
| DTW (FEET) | | 3 | | | | | | | | |
| DTB (FEET) | | 4 | | | | | | | | |
| DTB - DTW | | 5 | | | | | | | | |
| CAPACITY PER
FOOT | 0.653 - 4" | 6 | | | | | | | | |
| | 0.163 - 2" | | | | | | | | | |

PURGING DATA

| | | |
|----------------------|--|--------------------------|
| 3 WELL
VOLUMES | | WEATHER CONDITIONS: |
| PURGE DATE | | WATER APPEARANCE / ODOR: |
| END OF
PURGE TIME | | COMMENTS: |
| PURGE
AMOUNT | | |
| DTW (FEET) | | |

SAMPLING DATA

| | | |
|-------------|----------|--------------------------|
| SAMPLE DATE | 12/30/22 | WEATHER CONDITIONS: |
| DTW (FEET) | | Cloudy / Windy |
| | | WATER APPEARANCE / ODOR: |
| | | Greenish / slight smell |
| SAMPLE TIME | 11:05 | COMMENTS: |

SAMPLE LOG

| SAMPLE ID | CONTAINER TYPE | NUMBER OF CONTAINERS | PRESERVATIVE |
|-----------|-------------------------|----------------------|---|
| | 40 ML VOA | 6 | HCL |
| | 40 ML VOA | 2 | NA ₂ S ₂ O ₃ |
| | 1 LITER AMBER | 2 | NEAT |
| | 500 ML AMBER | 1 | NEAT |
| | 250 ML PLASTIC | 1 | HNO ₃ |
| | 125 ML PLASTIC FILTERED | 1 | HNO ₃ |
| | 500 ML PLASTIC | 1 | NaOH |

INSTRUMENTS USED WATER QUALITY METER

COMPLETED BY: _____

SIGNATURE: _____



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix B – Historical Fluid Level Measurements

Appendix B-1. Historical Fluid Level Monitoring (2014-2022)

Appendix B-2. Hydrographs



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix B-1. Historical Fluid Level Monitoring (2014-2022)

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|-------------------------------------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| Alluvial/Fluvial Upper Sand Aquifer | | | | | | | | | | | |
| BW-1A | 9/8/2014 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 44.11 | 30.0 | 35.0 |
| BW-1A | 8/10/2015 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 44.11 | 30.0 | 35.0 |
| BW-1A | 9/8/2016 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 44.11 | 30.0 | 35.0 |
| BW-1A | 9/13/2017 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 44.11 | 30.0 | 35.0 |
| BW-1A | 8/15/2018 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 40.66 | 30.0 | 35.0 |
| BW-1A | 8/14/2019 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 40.66 | 30.0 | 35.0 |
| BW-1A | 9/14/2020 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 41.75 | 30.0 | 35.0 |
| BW-1A | 9/28/2021 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 41.75 | 30.0 | 35.0 |
| BW-1A | 9/2/2022 | ND | Dry | NA | Dry | 6883.17 | 6885.12 | 1.95 | 41.75 | 30.0 | 35.0 |
| BW-2A | 9/9/2014 | ND | 29.44 | NA | 6842.44 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 8/10/2015 | ND | 29.19 | NA | 6842.69 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 9/8/2016 | ND | 29.48 | NA | 6842.40 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 9/13/2017 | ND | 29.63 | NA | 6842.25 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 8/15/2018 | ND | 29.53 | NA | 6842.35 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 8/14/2019 | ND | 29.45 | NA | 6842.43 | 6871.88 | 6874.69 | 2.81 | 64.76 | 55.0 | 65.0 |
| BW-2A | 9/14/2020 | ND | 30.12 | NA | 6841.76 | 6871.88 | 6874.69 | 2.81 | 64.40 | 55.0 | 65.0 |
| BW-2A | 9/28/2021 | ND | 30.04 | NA | 6841.84 | 6871.88 | 6874.69 | 2.81 | 64.40 | 55.0 | 65.0 |
| BW-2A | 9/2/2022 | 30.94 | 31.04 | 0.10 | 6840.84 | 6871.88 | 6874.69 | 2.81 | 64.40 | 55.0 | 65.0 |
| BW-3A | 9/8/2014 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.90 | 39.5 | 49.5 |
| BW-3A | 8/10/2015 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.90 | 39.5 | 49.5 |
| BW-3A | 9/8/2016 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.90 | 39.5 | 49.5 |
| BW-3A | 9/13/2017 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.90 | 39.5 | 49.5 |
| BW-3A | 8/15/2018 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.93 | 39.5 | 49.5 |
| BW-3A | 8/14/2019 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 49.93 | 39.5 | 49.5 |
| BW-3A | 9/14/2020 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 50.85 | 39.5 | 49.5 |
| BW-3A | 9/28/2021 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 50.85 | 39.5 | 49.5 |
| BW-3A | 9/2/2022 | ND | Dry | NA | Dry | 6875.94 | 6878.39 | 2.45 | 50.25 | 39.5 | 49.5 |
| BW-4A | 9/21/2017 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 36.29 | 21.0 | 36.0 |
| BW-4A | 12/8/2017 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 35.79 | 21.0 | 36.0 |
| BW-4A | 2/26/2018 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 36.29 | 21.0 | 36.0 |
| BW-4A | 4/25/2018 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 36.29 | 21.0 | 36.0 |
| BW-4A | 8/15/2018 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 36.29 | 21.0 | 36.0 |
| BW-4A | 11/7/2018 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.51 | 35.79 | 21.0 | 36.0 |
| BW-4A | 3/27/2019 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.40 | 21.0 | 36.0 |
| BW-4A | 5/21/2019 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.40 | 21.0 | 36.0 |
| BW-4A | 8/23/2019 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.40 | 21.0 | 36.0 |
| BW-4A | 10/16/2019 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.40 | 21.0 | 36.0 |
| BW-4A | 3/9/2020 | ND | 35.42 | NA | 6834.84 | 6870.67 | 6873.18 | 2.92 | 35.88 | 21.0 | 36.0 |
| BW-4A | 6/30/2020 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.88 | 21.0 | 36.0 |
| BW-4A | 9/14/2020 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-4A | 12/7/2020 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-4A | 2/27/2021 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-4A | 6/3/2021 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-4A | 9/28/2021 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-4A | 9/2/2022 | ND | Dry | NA | Dry | 6870.67 | 6873.18 | 2.92 | 35.98 | 21.0 | 36.0 |
| BW-5A | 9/21/2017 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.39 | 10.0 | 20.0 |
| BW-5A | 12/8/2017 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.41 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|-------------------------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| BW-5A | 2/26/2018 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.41 | 10.0 | 20.0 |
| BW-5A | 4/25/2018 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.41 | 10.0 | 20.0 |
| BW-5A | 8/15/2018 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.41 | 10.0 | 20.0 |
| BW-5A | 11/13/2018 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.61 | 20.41 | 10.0 | 20.0 |
| BW-5A | 3/27/2019 | ND | 20.37 | NA | 6853.75 | 6874.39 | 6877.00 | 2.88 | 20.12 | 10.0 | 20.0 |
| BW-5A | 5/21/2019 | ND | 20.42 | NA | 6853.70 | 6874.39 | 6877.00 | 2.88 | 20.12 | 10.0 | 20.0 |
| BW-5A | 8/15/2019 | ND | 18.38 | NA | 6855.74 | 6874.39 | 6877.00 | 2.88 | 20.14 | 10.0 | 20.0 |
| BW-5A | 10/16/2019 | ND | 20.37 | NA | 6853.75 | 6874.39 | 6877.00 | 2.88 | 20.42 | 10.0 | 20.0 |
| BW-5A | 3/5/2020 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.88 | 20.12 | 10.0 | 20.0 |
| BW-5A | 6/26/2020 | ND | 20.33 | NA | 6853.79 | 6874.39 | 6877.00 | 2.88 | 20.12 | 10.0 | 20.0 |
| BW-5A | 9/14/2020 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.88 | 20.52 | 10.0 | 20.0 |
| BW-5A | 12/7/2020 | ND | 20.39 | NA | 6853.73 | 6874.39 | 6877.00 | 2.88 | 20.52 | 10.0 | 20.0 |
| BW-5A | 2/27/2021 | ND | 20.35 | NA | 6853.77 | 6874.39 | 6877.00 | 2.88 | 20.45 | 10.0 | 20.0 |
| BW-5A | 6/3/2021 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.88 | 20.45 | 10.0 | 20.0 |
| BW-5A | 9/9/2021 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.88 | 20.45 | 10.0 | 20.0 |
| BW-5A | 9/1/2022 | ND | Dry | NA | Dry | 6874.39 | 6877.00 | 2.88 | 20.45 | 10.0 | 20.0 |
| Chinle/Alluvium Aquifer | | | | | | | | | | | |
| BW-1B | 9/8/2014 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 73.68 | 54.6 | 64.6 |
| BW-1B | 8/10/2015 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 73.68 | 54.6 | 64.6 |
| BW-1B | 9/8/2016 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 73.68 | 54.6 | 64.6 |
| BW-1B | 9/13/2017 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 73.68 | 54.6 | 64.6 |
| BW-1B | 8/15/2018 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 70.94 | 54.6 | 64.6 |
| BW-1B | 8/14/2019 | ND | 69.61 | NA | 6813.56 | 6883.17 | 6885.78 | 2.61 | 70.94 | 54.6 | 64.6 |
| BW-1B | 9/14/2020 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 70.77 | 54.6 | 64.6 |
| BW-1B | 9/28/2021 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 70.77 | 54.6 | 64.6 |
| BW-1B | 9/2/2022 | ND | Dry | NA | Dry | 6883.17 | 6885.78 | 2.61 | 70.59 | 54.6 | 64.6 |
| BW-2B | 9/9/2014 | ND | 25.31 | NA | 6846.35 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 8/10/2015 | ND | 25.16 | NA | 6846.50 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 9/8/2016 | ND | 25.00 | NA | 6846.66 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 9/13/2017 | ND | 25.44 | NA | 6846.22 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 8/15/2018 | ND | 25.41 | NA | 6846.25 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 8/14/2019 | ND | 25.61 | NA | 6846.05 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 9/14/2020 | ND | 25.95 | NA | 6845.71 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 9/28/2021 | ND | 25.52 | NA | 6846.14 | 6871.66 | 6874.50 | 2.84 | 89.42 | 80.0 | 90.0 |
| BW-2B | 9/27/2022 | ND | 25.44 | NA | 6846.22 | 6871.66 | 6874.50 | 2.84 | 50.56 | 80.0 | 90.0 |
| BW-3B | 9/10/2014 | ND | 30.82 | NA | 6845.34 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 8/10/2015 | ND | 30.57 | NA | 6845.59 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 9/8/2016 | ND | 30.99 | NA | 6845.17 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 9/13/2017 | ND | 30.95 | NA | 6845.21 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 8/15/2018 | ND | 30.92 | NA | 6845.24 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 8/14/2019 | ND | 30.88 | NA | 6845.28 | 6876.16 | 6878.59 | 2.43 | 66.97 | 63.0 | 73.0 |
| BW-3B | 9/14/2020 | ND | 31.81 | NA | 6844.35 | 6876.16 | 6878.59 | 2.43 | 67.11 | 63.0 | 73.0 |
| BW-3B | 9/28/2021 | ND | 31.20 | NA | 6844.96 | 6876.16 | 6878.59 | 2.43 | 67.11 | 63.0 | 73.0 |
| BW-3B | 9/27/2022 | ND | 31.17 | NA | 6844.99 | 6876.16 | 6878.59 | 2.43 | 67.27 | 63.0 | 73.0 |
| BW-4B | 9/21/2017 | ND | 28.97 | NA | 6841.65 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |
| BW-4B | 12/8/2017 | ND | 35.34 | NA | 6835.28 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |
| BW-4B | 2/26/2018 | ND | 35.82 | NA | 6834.80 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |
| BW-4B | 4/25/2018 | ND | 40.99 | NA | 6829.63 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| BW-4B | 8/15/2018 | ND | 36.44 | NA | 6834.18 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |
| BW-4B | 11/13/2018 | ND | 42.26 | NA | 6828.36 | 6870.62 | 6873.23 | 2.61 | 60.89 | 41.0 | 61.0 |
| BW-4B | 3/27/2019 | ND | 36.51 | NA | 6833.93 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 5/21/2019 | ND | 43.22 | NA | 6827.22 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 8/23/2019 | ND | 43.21 | NA | 6827.23 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 10/16/2019 | ND | 44.71 | NA | 6825.73 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 3/9/2020 | ND | 37.56 | NA | 6832.88 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 6/26/2020 | NA | NA | NA | NA | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 6/30/2020 | ND | 41.96 | NA | 6828.48 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 9/14/2020 | ND | 37.07 | NA | 6833.37 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 12/7/2020 | ND | 33.07 | NA | 6837.37 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 2/27/2021 | ND | 44.29 | NA | 6826.15 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 6/2/2021 | ND | 42.79 | NA | 6827.65 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 9/28/2021 | ND | 39.72 | NA | 6830.72 | 6870.62 | 6873.23 | 2.79 | 60.71 | 41.0 | 61.0 |
| BW-4B | 9/2/2022 | ND | 33.11 | NA | 6837.33 | 6870.62 | 6873.23 | 2.79 | 48.11 | 41.0 | 61.0 |
| BW-4B | 12/22/2022 | ND | 45.06 | NA | 6825.38 | 6870.62 | 6873.23 | 2.79 | 48.11 | 41.0 | 61.0 |
| BW-5B | 9/21/2017 | ND | 6.15 | NA | 6868.17 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 12/8/2017 | ND | 6.50 | NA | 6867.82 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 2/26/2018 | ND | 7.78 | NA | 6866.54 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 4/25/2018 | ND | 7.25 | NA | 6867.07 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 8/15/2018 | ND | 7.54 | NA | 6866.78 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 11/13/2018 | ND | 8.07 | NA | 6866.25 | 6874.32 | 6876.82 | 2.50 | 58.95 | 48.0 | 58.0 |
| BW-5B | 3/27/2019 | ND | 6.84 | NA | 6867.44 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 5/21/2019 | ND | 6.66 | NA | 6867.62 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 8/15/2019 | ND | 7.13 | NA | 6867.15 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 10/16/2019 | ND | 7.73 | NA | 6866.55 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 3/5/2020 | ND | 7.40 | NA | 6866.88 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 6/26/2020 | ND | 7.67 | NA | 6866.61 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 9/14/2020 | ND | 8.07 | NA | 6866.21 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 12/7/2020 | ND | 7.99 | NA | 6866.29 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 2/27/2021 | ND | 6.87 | NA | 6867.41 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 6/2/2021 | ND | 7.96 | NA | 6866.32 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 9/9/2021 | ND | 8.46 | NA | 6865.82 | 6874.32 | 6876.82 | 2.54 | 58.91 | 48.0 | 58.0 |
| BW-5B | 3/1/2022 | ND | 7.56 | NA | 6866.72 | 6874.32 | 6876.82 | 2.54 | 51.81 | 48.0 | 58.0 |
| BW-5B | 6/1/2022 | ND | 7.56 | NA | 6866.72 | 6874.32 | 6876.82 | 2.54 | 51.81 | 48.0 | 58.0 |
| BW-5B | 9/2/2022 | ND | 7.70 | NA | 6866.58 | 6874.32 | 6876.82 | 2.54 | 51.81 | 48.0 | 58.0 |
| BW-5B | 12/11/2022 | ND | 7.76 | NA | 6866.52 | 6874.32 | 6876.82 | 2.54 | 51.81 | 48.0 | 58.0 |
| BW-5B | 12/22/2022 | ND | 7.61 | NA | 6866.67 | 6874.32 | 6876.82 | 2.54 | 51.81 | 48.0 | 58.0 |
| GWM-1 | 3/11/2014 | ND | 16.53 | NA | 6893.69 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 6/5/2014 | ND | 16.71 | NA | 6893.51 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 9/12/2014 | ND | 17.17 | NA | 6893.05 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 11/13/2014 | ND | 17.69 | NA | 6892.53 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 3/10/2015 | ND | 18.60 | NA | 6891.62 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 6/2/2015 | ND | 18.53 | NA | 6891.69 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 8/11/2015 | 19.01 | NA | NA | NA | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 8/24/2015 | 18.61 | 19.06 | 0.45 | 6891.16 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 10/29/2015 | 18.74 | 19.08 | 0.34 | 6891.14 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 3/1/2016 | 20.45 | 20.49 | 0.04 | 6889.73 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| GWM-1 | 6/7/2016 | 18.97 | 19.00 | 0.03 | 6891.22 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 9/13/2016 | 18.90 | NA | NA | NA | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 11/14/2016 | 19.11 | 19.13 | 0.02 | 6891.09 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 3/16/2017 | 19.35 | 19.65 | 0.30 | 6890.57 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 6/2/2017 | 19.15 | 19.59 | 0.44 | 6890.63 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 9/8/2017 | 19.10 | 19.32 | 0.22 | 6890.90 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 12/4/2017 | 17.31 | 18.31 | 1.00 | 6891.91 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 2/12/2018 | 19.44 | 19.81 | 0.37 | 6890.41 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 4/26/2018 | 19.46 | 19.86 | 0.40 | 6890.36 | 6910.22 | 6912.61 | 2.39 | 23.99 | 17.5 | 23.5 |
| GWM-1 | 8/15/2018 | 19.11 | 19.15 | 0.04 | 6891.07 | 6910.22 | 6912.61 | 2.39 | 24.03 | 17.5 | 23.5 |
| GWM-1 | 11/19/2018 | 19.03 | 19.16 | 0.13 | 6891.06 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 3/28/2019 | 19.20 | 19.68 | 0.48 | 6890.54 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 5/8/2019 | 18.93 | 19.22 | 0.29 | 6891.00 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 8/6/2019 | 18.38 | 18.51 | 0.13 | 6891.71 | 6910.22 | 6912.61 | 2.39 | 24.03 | 17.5 | 23.5 |
| GWM-1 | 10/21/2019 | 18.25 | 18.44 | 0.19 | 6891.78 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 3/3/2020 | 19.01 | 19.09 | 0.08 | 6891.13 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 7/1/2020 | 17.98 * | 18.43 * | 0.45 | 6892.24 | 6910.22 | 6912.61 | 2.39 | 23.81 | 17.5 | 23.5 |
| GWM-1 | 9/15/2020 | 18.34 | 19.01 | 0.67 | 6891.21 | 6910.22 | 6912.61 | 2.39 | 24.26 | 17.5 | 23.5 |
| GWM-1 | 11/9/2020 | 18.49 | 19.33 | 0.84 | 6890.89 | 6910.22 | 6912.61 | 2.39 | 24.26 | 17.5 | 23.5 |
| GWM-1 | 12/7/2020 | 18.52 | 19.46 | 0.94 | 6890.76 | 6910.22 | 6912.61 | 2.39 | 24.06 | 17.5 | 23.5 |
| GWM-1 | 1/28/2021 | 18.71 | 19.91 | 1.20 | 6890.31 | 6910.22 | 6912.61 | 2.39 | 23.86 | 17.5 | 23.5 |
| GWM-1 | 2/28/2021 | 18.80 | 20.18 | 1.38 | 6890.04 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 3/31/2021 | 18.80 | 20.18 | 1.38 | 6890.04 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 4/26/2021 | 19.75 | 20.59 | 0.84 | 6889.63 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 5/20/2021 | 19.27 | 20.53 | 1.26 | 6889.69 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 6/2/2021 | 18.87 | 20.28 | 1.41 | 6889.94 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 9/9/2021 | 18.85 | 20.08 | 1.23 | 6890.14 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 12/3/2021 | 18.50 | 19.77 | 1.27 | 6890.45 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 1/10/2022 | 18.54 | 20.73 | 2.19 | 6889.49 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 2/28/2022 | 18.54 | 20.74 | 2.20 | 6889.48 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 3/1/2022 | 18.45 | 19.71 | 1.26 | 6890.51 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 4/27/2022 | 18.72 | 20.63 | 1.91 | 6889.59 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 5/5/2022 | 18.68 | 20.72 | 2.04 | 6889.50 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 6/1/2022 | 18.64 | 20.81 | 2.17 | 6889.41 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 7/7/2022 | 19.01 | 21.23 | 2.22 | 6888.99 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 8/9/2022 | 18.97 | 21.26 | 2.29 | 6888.96 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 9/5/2022 | 18.51 | 20.59 | 2.08 | 6889.63 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 10/5/2022 | 18.66 | 20.66 | 2.00 | 6889.56 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 11/2/2022 | 18.72 | 20.73 | 2.01 | 6889.49 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-1 | 12/6/2022 | 18.62 | 20.69 | 2.07 | 6889.53 | 6910.22 | 6912.61 | 2.39 | 24.01 | 17.5 | 23.5 |
| GWM-2 | 3/11/2014 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 6/5/2014 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 9/12/2014 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 11/11/2014 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 3/10/2015 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 6/2/2015 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 8/11/2015 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 10/29/2015 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| GWM-2 | 3/1/2016 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 6/7/2016 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 9/13/2016 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 11/14/2016 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 3/16/2017 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 6/2/2017 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 9/5/2017 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 12/4/2017 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 2/12/2018 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.28 | 3.2 | 16.2 |
| GWM-2 | 4/26/2018 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.24 | 3.2 | 16.2 |
| GWM-2 | 8/15/2018 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.27 | 3.2 | 16.2 |
| GWM-2 | 11/19/2018 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 3/28/2019 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.32 | 3.2 | 16.2 |
| GWM-2 | 5/8/2019 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.32 | 3.2 | 16.2 |
| GWM-2 | 8/6/2019 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.27 | 3.2 | 16.2 |
| GWM-2 | 10/19/2019 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 3/3/2020 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 16.04 | 3.2 | 16.2 |
| GWM-2 | 7/1/2020 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 8.69 | 3.2 | 16.2 |
| GWM-2 | 9/15/2020 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 11/10/2020 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 12/7/2020 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 1/28/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 2/28/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 3/31/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 4/26/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 5/20/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 6/3/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 9/9/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 12/2/2021 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 1/10/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 2/28/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 3/1/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 4/27/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 5/5/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 6/1/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 7/7/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 8/9/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 9/5/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 10/5/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 11/2/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-2 | 12/6/2022 | ND | Dry | NA | Dry | 6910.32 | 6913.09 | 2.77 | 15.31 | 3.2 | 16.2 |
| GWM-3 | 3/11/2014 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 6/5/2014 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 9/12/2014 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 11/11/2014 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 3/10/2015 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 6/2/2015 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 8/11/2015 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| GWM-3 | 10/29/2015 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 3/1/2016 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 6/7/2016 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 9/13/2016 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 11/14/2016 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 3/16/2017 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 6/2/2017 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 9/5/2017 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 12/4/2017 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 2/12/2018 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.15 | 3.0 | 5.0 |
| GWM-3 | 4/26/2018 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.12 | 3.0 | 5.0 |
| GWM-3 | 8/15/2018 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.14 | 3.0 | 5.0 |
| GWM-3 | 11/19/2018 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 14.90 | 3.0 | 5.0 |
| GWM-3 | 3/28/2019 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.16 | 3.0 | 5.0 |
| GWM-3 | 5/8/2019 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.16 | 3.0 | 5.0 |
| GWM-3 | 8/6/2019 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.14 | 3.0 | 5.0 |
| GWM-3 | 3/3/2020 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 15.14 | 3.0 | 5.0 |
| GWM-3 | 7/1/2020 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 8.64 | 3.0 | 5.0 |
| GWM-3 | 9/15/2020 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 10/11/2020 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 12/7/2020 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 1/28/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 2/28/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 3/31/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 4/26/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 5/20/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 6/3/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 9/9/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 12/2/2021 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 1/10/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 2/28/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 3/1/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 4/27/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 5/5/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 6/1/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 7/7/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 8/9/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 9/5/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 10/5/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 11/2/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| GWM-3 | 12/6/2022 | ND | Dry | NA | Dry | 6907.35 | 6910.25 | 2.90 | 16.25 | 3.0 | 5.0 |
| KA-3 | 3/10/2014 | ND | 8.80 | NA | 6904.49 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/5/2014 | ND | 8.72 | NA | 6904.57 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/11/2014 | ND | 9.77 | NA | 6903.52 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 11/11/2014 | ND | 8.77 | NA | 6904.52 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 3/10/2015 | ND | 9.01 | NA | 6904.28 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/2/2015 | ND | 9.36 | NA | 6903.93 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 8/10/2015 | ND | 9.55 | NA | 6903.74 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| KA-3 | 10/28/2015 | ND | 8.97 | NA | 6904.32 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 3/3/2016 | ND | 8.45 | NA | 6904.84 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/6/2016 | ND | 8.19 | NA | 6905.10 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/1/2016 | ND | 8.90 | NA | 6904.39 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 11/14/2016 | ND | 9.05 | NA | 6904.24 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 2/21/2017 | ND | 8.14 | NA | 6905.15 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/1/2017 | ND | 8.99 | NA | 6904.30 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/5/2017 | ND | 8.98 | NA | 6904.31 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 12/4/2017 | ND | 8.77 | NA | 6904.52 | 6913.29 | 6912.52 | -0.77 | 25.05 | 15.0 | 25.0 |
| KA-3 | 2/9/2018 | ND | 9.17 | NA | 6904.12 | 6913.29 | 6912.52 | -0.77 | 25.07 | 15.0 | 25.0 |
| KA-3 | 4/26/2018 | ND | 9.27 | NA | 6904.02 | 6913.29 | 6912.52 | -0.77 | 25.01 | 15.0 | 25.0 |
| KA-3 | 8/15/2018 | NA | NA | NA | NA | 6913.29 | 6912.52 | -0.77 | 25.01 | 15.0 | 25.0 |
| KA-3 | 11/8/2018 | NA | NA | NA | NA | 6913.29 | 6912.52 | -0.77 | 25.01 | 15.0 | 25.0 |
| KA-3 | 3/28/2019 | NA | NA | NA | NA | 6913.29 | 6912.52 | -0.77 | 25.01 | 15.0 | 25.0 |
| KA-3 | 5/28/2019 | ND | 10.72 | NA | 6902.57 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 8/22/2019 | ND | 9.82 | NA | 6903.47 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 10/21/2019 | ND | 9.93 | NA | 6903.36 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 3/3/2020 | ND | 10.07 | NA | 6903.22 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 7/1/2020 | ND | 9.52 | NA | 6903.77 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/15/2020 | ND | 8.85 | NA | 6904.44 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 12/7/2020 | ND | 10.33 | NA | 6902.96 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 1/28/2021 | ND | 11.27 | NA | 6902.02 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 2/28/2021 | ND | 11.32 | NA | 6901.97 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 3/31/2021 | ND | 11.45 | NA | 6901.84 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 4/26/2021 | ND | 10.59 | NA | 6902.70 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 5/20/2021 | ND | 11.80 | NA | 6901.49 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/3/2021 | ND | 11.17 | NA | 6902.12 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/8/2021 | ND | 10.08 | NA | 6903.21 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 12/13/2021 | ND | 10.33 | NA | 6902.96 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 1/10/2022 | ND | 10.21 | NA | 6903.08 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 2/28/2022 | ND | 10.18 | NA | 6903.11 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 3/1/2022 | ND | 10.30 | NA | 6902.99 | 6913.29 | 6912.52 | -0.77 | 32.16 | 15.0 | 25.0 |
| KA-3 | 4/27/2022 | ND | 10.86 | NA | 6902.43 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 5/5/2022 | ND | 10.90 | NA | 6902.39 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 6/2/2022 | ND | 11.72 | NA | 6901.57 | 6913.29 | 6912.52 | -0.77 | 32.42 | 15.0 | 25.0 |
| KA-3 | 7/7/2022 | ND | 11.45 | NA | 6901.84 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 8/9/2022 | ND | 11.32 | NA | 6901.97 | 6913.29 | 6912.52 | -0.77 | 23.97 | 15.0 | 25.0 |
| KA-3 | 9/2/2022 | ND | 11.57 | NA | 6901.72 | 6913.29 | 6912.52 | -0.77 | 32.37 | 15.0 | 25.0 |
| KA-3 | 10/5/2022 | ND | 11.80 | NA | 6901.49 | 6913.29 | 6912.52 | -0.77 | 32.37 | 15.0 | 25.0 |
| KA-3 | 11/2/2022 | ND | 11.72 | NA | 6901.57 | 6913.29 | 6912.52 | -0.77 | 32.37 | 15.0 | 25.0 |
| KA-3 | 12/7/2022 | ND | 11.89 | NA | 6901.40 | 6913.29 | 6912.52 | -0.77 | 32.42 | 15.0 | 25.0 |
| MKTF-01 | 1/13/2014 | 5.51 | 5.95 | 0.44 | 6912.33 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 2/12/2014 | 4.34 | 5.09 | 0.75 | 6913.19 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 3/11/2014 | 3.71 | 3.99 | 0.28 | 6914.29 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 6/6/2014 | ND | 4.61 | NA | 6913.67 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 9/15/2014 | 4.55 | 4.59 | 0.04 | 6913.69 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 11/14/2014 | 4.91 | 4.93 | 0.02 | 6913.35 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 3/11/2015 | ND | 3.46 | NA | 6914.82 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-01 | 6/9/2015 | ND | 4.76 | NA | 6913.52 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 8/21/2015 | ND | 3.84 | NA | 6914.44 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 11/4/2015 | ND | 3.48 | NA | 6914.80 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 2/24/2016 | ND | 3.45 | NA | 6914.83 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 6/10/2016 | ND | 4.63 | NA | 6913.65 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 9/7/2016 | 4.73 | 6.23 | 1.50 | 6912.05 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 11/4/2016 | ND | 3.48 | NA | 6914.80 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 3/14/2017 | 2.26 | 2.42 | 0.16 | 6915.86 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 6/7/2017 | 2.50 | 3.03 | 0.53 | 6915.25 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 10/3/2017 | 3.81 | 4.17 | 0.36 | 6914.11 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 11/20/2017 | 2.23 | 2.56 | 0.33 | 6915.72 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 2/7/2018 | 2.66 | 3.01 | 0.35 | 6915.27 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 4/25/2018 | 3.83 | 4.13 | 0.30 | 6914.15 | 6918.28 | 6920.67 | 2.39 | 14.96 | 5.0 | 15.0 |
| MKTF-01 | 8/15/2018 | 4.01 | 4.32 | 0.31 | 6913.96 | 6918.28 | 6920.67 | 2.39 | 14.88 | 5.0 | 15.0 |
| MKTF-01 | 11/27/2018 | 3.11 | 3.48 | 0.37 | 6914.80 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 2/19/2019 | 2.01 | 2.35 | 0.34 | 6915.93 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 5/6/2019 | 2.00 | 2.35 | 0.35 | 6915.93 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 8/30/2019 | 2.19 | 2.56 | 0.37 | 6915.72 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 11/19/2019 | 2.75 | 3.06 | 0.31 | 6915.22 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 2/24/2020 | 2.48 | 2.77 | 0.29 | 6915.51 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 6/26/2020 | 3.11 | 3.32 | 0.21 | 6914.96 | 6918.28 | 6920.67 | 2.39 | 15.03 | 5.0 | 15.0 |
| MKTF-01 | 9/15/2020 | 3.22 | 3.23 | 0.01 | 6915.05 | 6918.28 | 6920.67 | 2.39 | 15.09 | 5.0 | 15.0 |
| MKTF-01 | 11/10/2020 | 3.22 | 3.50 | 0.28 | 6914.78 | 6918.28 | 6920.67 | 2.39 | 15.09 | 5.0 | 15.0 |
| MKTF-01 | 12/3/2020 | 3.35 | 3.63 | 0.28 | 6914.65 | 6918.28 | 6920.67 | 2.39 | 15.04 | 5.0 | 15.0 |
| MKTF-01 | 1/28/2021 | 5.21 | 5.69 | 0.48 | 6912.59 | 6918.28 | 6920.67 | 2.39 | 15.04 | 5.0 | 15.0 |
| MKTF-01 | 2/28/2021 | 3.31 | 3.54 | 0.23 | 6914.74 | 6918.28 | 6920.67 | 2.39 | 15.06 | 5.0 | 15.0 |
| MKTF-01 | 3/31/2021 | 3.70 | 3.94 | 0.24 | 6914.34 | 6918.28 | 6920.67 | 2.39 | 15.06 | 5.0 | 15.0 |
| MKTF-01 | 4/26/2021 | 3.49 | 3.83 | 0.34 | 6914.45 | 6918.28 | 6920.67 | 2.39 | 15.06 | 5.0 | 15.0 |
| MKTF-01 | 5/20/2021 | 4.02 | 4.38 | 0.36 | 6913.90 | 6918.28 | 6920.67 | 2.39 | 15.06 | 5.0 | 15.0 |
| MKTF-01 | 6/1/2021 | 3.42 | 3.73 | 0.31 | 6914.55 | 6918.28 | 6920.67 | 2.39 | 14.99 | 5.0 | 15.0 |
| MKTF-01R | 8/31/2021 | ND | 3.60 | NA | NA | 6921.82 | NA | -0.20 | NA | 3.0 | 18.0 |
| MKTF-01R | 12/3/2021 | ND | 3.55 | NA | 6918.27 | 6921.82 | 6921.62 | -0.20 | NA | 3.0 | 18.0 |
| MKTF-01R | 1/28/2022 | ND | 3.50 | NA | 6918.32 | 6921.82 | 6921.62 | -0.20 | 18.30 | 3.0 | 18.0 |
| MKTF-01R | 2/28/2022 | ND | 3.60 | NA | 6918.22 | 6921.82 | 6921.62 | -0.20 | 18.30 | 3.0 | 18.0 |
| MKTF-01R | 3/1/2022 | ND | 3.56 | NA | 6918.26 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 4/27/2022 | ND | 3.50 | NA | 6918.32 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 5/5/2022 | ND | 3.49 | NA | 6918.33 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 6/2/2022 | 3.50 | 3.53 | 0.03 | 6918.29 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 7/6/2022 | 3.80 | 3.87 | 0.07 | 6917.95 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 8/8/2022 | 3.62 | 3.65 | 0.03 | 6918.17 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 9/1/2022 | 3.62 | 3.65 | 0.03 | 6918.17 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 10/3/2022 | 3.65 | 3.68 | 0.03 | 6918.14 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 11/2/2022 | 3.67 | 3.71 | 0.04 | 6918.11 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-01R | 12/6/2022 | 3.69 | 3.75 | 0.06 | 6918.07 | 6921.82 | 6921.62 | -0.20 | 18.31 | 3.0 | 18.0 |
| MKTF-02 | 1/13/2014 | ND | 5.04 | NA | 6909.96 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 2/12/2014 | ND | 5.03 | NA | 6909.97 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 3/11/2014 | ND | 4.58 | NA | 6910.42 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 6/6/2014 | ND | 5.15 | NA | 6909.85 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-02 | 9/15/2014 | ND | 5.96 | NA | 6909.04 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 11/14/2014 | ND | 5.76 | NA | 6909.24 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 3/11/2015 | ND | 4.43 | NA | 6910.57 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 6/9/2015 | ND | 5.10 | NA | 6909.90 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 8/21/2015 | ND | 4.85 | NA | 6910.15 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 11/4/2015 | ND | 4.80 | NA | 6910.20 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 2/24/2016 | ND | 4.77 | NA | 6910.23 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 6/10/2016 | ND | 5.64 | NA | 6909.36 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 9/7/2016 | ND | 5.83 | NA | 6909.17 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 11/4/2016 | ND | 4.80 | NA | 6910.20 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 3/16/2017 | ND | 4.89 | NA | 6910.11 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 6/7/2017 | 4.65 | 4.66 | 0.01 | 6910.34 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 10/3/2017 | ND | 4.22 | NA | 6910.78 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 11/20/2017 | ND | 4.55 | NA | 6910.45 | 6915.00 | 6917.45 | 2.45 | 17.90 | 7.0 | 17.0 |
| MKTF-02 | 2/6/2018 | ND | 4.99 | NA | 6910.01 | 6915.00 | 6917.45 | 2.45 | 17.89 | 7.0 | 17.0 |
| MKTF-02 | 4/25/2018 | ND | 5.50 | NA | 6909.50 | 6915.00 | 6917.45 | 2.45 | 17.91 | 7.0 | 17.0 |
| MKTF-02 | 8/15/2018 | ND | 5.95 | NA | 6909.05 | 6915.00 | 6917.45 | 2.45 | 17.98 | 7.0 | 17.0 |
| MKTF-02 | 11/27/2018 | ND | 5.95 | NA | 6909.05 | 6915.00 | 6917.45 | 2.45 | 17.90 | 7.0 | 17.0 |
| MKTF-02 | 3/28/2019 | ND | 3.89 | NA | 6911.11 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 5/6/2019 | ND | 3.79 | NA | 6911.21 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 8/23/2019 | ND | 4.60 | NA | 6910.40 | 6915.00 | 6917.45 | 2.45 | 17.98 | 7.0 | 17.0 |
| MKTF-02 | 11/19/2019 | ND | 4.69 | NA | 6910.31 | 6915.00 | 6917.45 | 2.45 | 17.90 | 7.0 | 17.0 |
| MKTF-02 | 2/24/2020 | ND | 4.07 | NA | 6910.93 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 6/26/2020 | ND | 5.25 | NA | 6909.75 | 6915.00 | 6917.45 | 2.45 | 18.03 | 7.0 | 17.0 |
| MKTF-02 | 9/15/2020 | ND | 5.43 | NA | 6909.57 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 11/10/2020 | ND | 4.98 | NA | 6910.02 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 12/3/2020 | ND | 5.27 | NA | 6909.73 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 1/28/2021 | ND | 5.30 | NA | 6909.70 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 2/28/2021 | ND | 4.69 | NA | 6910.31 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 3/31/2021 | ND | 5.39 | NA | 6909.61 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 4/26/2021 | ND | 5.33 | NA | 6909.67 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 5/20/2021 | ND | 5.66 | NA | 6909.34 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02 | 6/1/2021 | ND | 5.57 | NA | 6909.43 | 6915.00 | 6917.45 | 2.45 | 18.09 | 7.0 | 17.0 |
| MKTF-02R | 8/31/2021 | ND | 13.65 | NA | NA | 6920.46 | NA | 2.45 | NA | 3.0 | 18.0 |
| MKTF-02R | 12/15/2021 | ND | 7.73 | NA | 6912.75 | 6920.46 | 6922.93 | 2.45 | NA | 3.0 | 18.0 |
| MKTF-02R | 1/10/2022 | ND | 7.70 | NA | 6912.78 | 6920.46 | 6922.93 | 2.45 | 19.04 | 3.0 | 18.0 |
| MKTF-02R | 2/28/2022 | ND | 7.65 | NA | 6912.83 | 6920.46 | 6922.93 | 2.45 | 19.04 | 3.0 | 18.0 |
| MKTF-02R | 3/1/2022 | ND | 7.75 | NA | 6912.73 | 6920.46 | 6922.93 | 2.45 | 19.04 | 3.0 | 18.0 |
| MKTF-02R | 4/27/2022 | ND | 7.77 | NA | 6912.71 | 6920.46 | 6922.93 | 2.45 | 19.04 | 3.0 | 18.0 |
| MKTF-02R | 5/5/2022 | ND | 7.78 | NA | 6912.70 | 6920.46 | 6922.93 | 2.45 | 19.04 | 3.0 | 18.0 |
| MKTF-02R | 6/2/2022 | 7.72 | 7.74 | 0.02 | 6912.74 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 7/6/2022 | 7.53 | 7.56 | 0.03 | 6912.92 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 8/8/2022 | 7.65 | 7.68 | 0.03 | 6912.80 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 9/1/2022 | 7.66 | 7.68 | 0.02 | 6912.80 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 10/3/2022 | 7.67 | 7.69 | 0.02 | 6912.79 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 11/2/2022 | 7.65 | 7.68 | 0.03 | 6912.80 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-02R | 12/6/2022 | 7.53 | 7.58 | 0.05 | 6912.90 | 6920.46 | 6922.93 | 2.45 | 19.05 | 3.0 | 18.0 |
| MKTF-03 | 1/15/2014 | 8.14 | 9.44 | 1.30 | 6922.29 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-03 | 2/13/2014 | ND | 8.37 | NA | 6923.36 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/11/2014 | 8.19 | 9.11 | 0.92 | 6922.62 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 6/4/2014 | 8.89 | 9.36 | 0.47 | 6922.37 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 9/15/2014 | 9.10 | 9.20 | 0.10 | 6922.53 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 11/13/2014 | 9.35 | NA | NA | NA | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/17/2015 | 8.50 | 9.30 | 0.80 | 6922.43 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 6/4/2015 | 8.74 | 9.36 | 0.62 | 6922.37 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 8/18/2015 | 8.13 | 8.95 | 0.82 | 6922.78 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 11/3/2015 | 8.34 | 9.44 | 1.10 | 6922.29 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/17/2016 | 8.50 | 9.30 | 0.80 | 6922.43 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 6/9/2016 | 7.59 | 11.87 | 4.28 | 6919.86 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 9/12/2016 | 7.96 | 10.36 | 2.40 | 6921.37 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 11/3/2016 | 8.34 | 9.44 | 1.10 | 6922.29 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/2/2017 | 6.46 | 7.63 | 1.17 | 6924.10 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 6/7/2017 | 6.99 | 8.29 | 1.30 | 6923.44 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 9/26/2017 | 6.39 | 7.19 | 0.80 | 6924.54 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 11/28/2017 | 7.04 | 7.99 | 0.95 | 6923.74 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 2/8/2018 | 7.44 | 8.29 | 0.85 | 6923.44 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 4/25/2018 | 7.34 | 8.26 | 0.92 | 6923.47 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 8/16/2018 | 7.34 | 8.29 | 0.95 | 6923.44 | 6931.73 | 6931.69 | -0.04 | 18.57 | 3.0 | 18.0 |
| MKTF-03 | 11/19/2018 | 6.89 | 7.89 | 1.00 | 6923.84 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/25/2019 | 4.54 | 5.64 | 1.10 | 6926.09 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 5/13/2019 | 4.59 | 5.70 | 1.11 | 6926.03 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 8/21/2019 | 6.08 | 7.31 | 1.23 | 6924.42 | 6931.73 | 6931.69 | -0.04 | 18.57 | 3.0 | 18.0 |
| MKTF-03 | 10/30/2019 | 6.74 | 8.04 | 1.30 | 6923.69 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 3/5/2020 | 6.51 | 7.88 | 1.37 | 6923.85 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 6/26/2020 | 7.40 | 8.67 | 1.27 | 6923.06 | 6931.73 | 6931.69 | -0.04 | 18.49 | 3.0 | 18.0 |
| MKTF-03 | 9/15/2020 | 7.12 | 7.13 | 0.01 | 6924.60 | 6931.73 | 6931.69 | -0.04 | 18.63 | 3.0 | 18.0 |
| MKTF-03 | 11/10/2020 | 7.17 | 8.47 | 1.30 | 6923.26 | 6931.73 | 6931.69 | -0.04 | 18.63 | 3.0 | 18.0 |
| MKTF-03 | 12/3/2020 | 7.50 | 8.66 | 1.16 | 6923.07 | 6931.73 | 6931.69 | -0.04 | 18.62 | 3.0 | 18.0 |
| MKTF-03 | 1/28/2021 | 7.84 | 8.77 | 0.93 | 6922.96 | 6931.73 | 6931.69 | -0.04 | 18.61 | 3.0 | 18.0 |
| MKTF-03 | 2/28/2021 | 7.50 | 8.43 | 0.93 | 6923.30 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 3/31/2021 | 7.24 | 8.27 | 1.03 | 6923.46 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 4/26/2021 | 7.15 | 7.95 | 0.80 | 6923.78 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 5/20/2021 | 7.32 | 8.41 | 1.09 | 6923.32 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 6/1/2021 | 7.37 | 8.50 | 1.13 | 6923.23 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 9/9/2021 | 7.37 | 8.50 | 1.13 | 6923.23 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 12/3/2021 | 7.71 | 8.97 | 1.26 | 6922.76 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 1/10/2022 | 7.04 | 8.35 | 1.31 | 6923.38 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 2/28/2022 | 7.79 | 9.04 | 1.25 | 6922.69 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 3/2/2022 | 7.74 | 8.94 | 1.20 | 6922.79 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 4/27/2022 | 7.74 | 8.94 | 1.20 | 6922.79 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 5/5/2022 | 7.72 | 8.89 | 1.17 | 6922.84 | 6931.73 | 6931.69 | -0.04 | 18.66 | 3.0 | 18.0 |
| MKTF-03 | 6/2/2022 | 7.67 | 7.82 | 0.15 | 6923.91 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 7/6/2022 | 8.07 | 8.24 | 0.17 | 6923.49 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 8/8/2022 | 7.64 | 7.81 | 0.17 | 6923.92 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 9/1/2022 | 7.72 | 7.86 | 0.14 | 6923.87 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 10/3/2022 | 7.45 | 10.67 | 3.22 | 6921.06 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-03 | 11/2/2022 | 7.46 | 10.69 | 3.23 | 6921.04 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-03 | 12/9/2022 | 8.06 | 10.51 | 2.45 | 6921.22 | 6931.73 | 6931.69 | -0.04 | 18.68 | 3.0 | 18.0 |
| MKTF-04 | 1/15/2014 | ND | 10.61 | NA | 6923.29 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 2/13/2014 | ND | 11.01 | NA | 6922.89 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 3/11/2014 | ND | 10.53 | NA | 6923.37 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 6/4/2014 | ND | 11.32 | NA | 6922.58 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 9/15/2014 | ND | 11.42 | NA | 6922.48 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 11/13/2014 | ND | 11.68 | NA | 6922.22 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 3/16/2015 | ND | 10.58 | NA | 6923.32 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 6/4/2015 | ND | 11.33 | NA | 6922.57 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 8/18/2015 | ND | 10.97 | NA | 6922.93 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 11/3/2015 | ND | 4.56 | NA | 6929.34 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 2/29/2016 | ND | 11.01 | NA | 6922.89 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 6/9/2016 | ND | 10.63 | NA | 6923.27 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 9/11/2016 | ND | 10.56 | NA | 6923.34 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 11/3/2016 | ND | 10.73 | NA | 6923.17 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 3/2/2017 | ND | 8.64 | NA | 6925.26 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 6/7/2017 | ND | 9.61 | NA | 6924.29 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 9/26/2017 | ND | 9.13 | NA | 6924.77 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 11/29/2017 | ND | 9.63 | NA | 6924.27 | 6933.90 | 6933.57 | -0.33 | 22.63 | 10.0 | 22.0 |
| MKTF-04 | 2/14/2018 | ND | 10.18 | NA | 6923.72 | 6933.90 | 6933.57 | -0.33 | 22.70 | 10.0 | 22.0 |
| MKTF-04 | 4/25/2018 | ND | 10.03 | NA | 6923.87 | 6933.90 | 6933.57 | -0.33 | 22.62 | 10.0 | 22.0 |
| MKTF-04 | 8/16/2018 | ND | 10.03 | NA | 6923.87 | 6933.90 | 6933.57 | -0.33 | 22.72 | 10.0 | 22.0 |
| MKTF-04 | 11/19/2018 | ND | 8.72 | NA | 6925.18 | 6933.90 | 6933.57 | -0.33 | 22.63 | 10.0 | 22.0 |
| MKTF-04 | 3/25/2019 | ND | 6.78 | NA | 6927.12 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 5/13/2019 | ND | 6.88 | NA | 6927.02 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 8/21/2019 | ND | 8.60 | NA | 6925.30 | 6933.90 | 6933.57 | -0.33 | 22.72 | 10.0 | 22.0 |
| MKTF-04 | 10/30/2019 | ND | 9.26 | NA | 6924.64 | 6933.90 | 6933.57 | -0.33 | 22.63 | 10.0 | 22.0 |
| MKTF-04 | 3/2/2020 | ND | 8.80 | NA | 6925.10 | 6933.90 | 6933.57 | -0.33 | 22.54 | 10.0 | 22.0 |
| MKTF-04 | 6/26/2020 | ND | 10.08 | NA | 6923.82 | 6933.90 | 6933.57 | -0.33 | 22.48 | 10.0 | 22.0 |
| MKTF-04 | 9/15/2020 | 9.72 | 9.73 | 0.01 | 6924.17 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 11/10/2020 | ND | 9.53 | NA | 6924.37 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 12/3/2020 | 10.03 | 10.04 | 0.01 | 6923.86 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 1/28/2021 | ND | 10.47 | NA | 6923.43 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 2/28/2021 | 10.17 | 10.29 | 0.12 | 6923.61 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 3/31/2021 | 9.54 | 9.56 | 0.02 | 6924.34 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 4/26/2021 | 9.53 | 9.55 | 0.02 | 6924.35 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 5/20/2021 | 9.61 | 9.71 | 0.10 | 6924.19 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04 | 6/1/2021 | 9.52 | 9.55 | 0.03 | 6924.35 | 6933.90 | 6933.57 | -0.33 | 23.05 | 10.0 | 22.0 |
| MKTF-04R | 8/30/2021 | ND | 10.13 | NA | NA | 6938.49 | NA | -0.53 | NA | 4.0 | 19.0 |
| MKTF-04R | 12/3/2021 | ND | 10.18 | NA | 6928.31 | 6938.49 | 6937.96 | -0.53 | NA | 4.0 | 19.0 |
| MKTF-04R | 1/10/2022 | ND | 10.23 | NA | 6928.26 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 2/28/2022 | ND | 10.13 | NA | 6928.36 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 3/2/2022 | ND | 10.24 | NA | 6928.25 | 6938.49 | 6937.96 | -0.53 | 19.75 | 4.0 | 19.0 |
| MKTF-04R | 4/27/2022 | ND | 9.92 | NA | 6928.57 | 6938.49 | 6937.96 | -0.53 | 19.75 | 4.0 | 19.0 |
| MKTF-04R | 5/5/2022 | ND | 10.15 | NA | 6928.34 | 6938.49 | 6937.96 | -0.53 | 19.75 | 4.0 | 19.0 |
| MKTF-04R | 6/2/2022 | 10.17 | 10.18 | 0.01 | 6928.31 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 7/6/2022 | 10.33 | 10.36 | 0.03 | 6928.13 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-04R | 8/8/2022 | 10.56 | 10.58 | 0.02 | 6927.91 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 9/1/2022 | 10.14 | 10.16 | 0.02 | 6928.33 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 10/3/2022 | 10.25 | 10.28 | 0.03 | 6928.21 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 11/2/2022 | 10.23 | 10.26 | 0.03 | 6928.23 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-04R | 12/6/2022 | 10.03 | 10.08 | 0.05 | 6928.41 | 6938.49 | 6937.96 | -0.53 | 19.73 | 4.0 | 19.0 |
| MKTF-05 | 1/13/2014 | 12.31 | 12.37 | 0.06 | 6927.12 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 2/13/2014 | 12.60 | 12.64 | 0.04 | 6926.85 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 3/11/2014 | ND | 12.50 | NA | 6926.99 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/4/2014 | 12.87 | 12.92 | 0.05 | 6926.57 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 9/15/2014 | 12.57 | 12.93 | 0.36 | 6926.56 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/13/2014 | 13.06 | 13.44 | 0.38 | 6926.05 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 3/16/2015 | 12.99 | 13.35 | 0.36 | 6926.14 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/4/2015 | 13.04 | 13.67 | 0.63 | 6925.82 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 8/18/2015 | 12.71 | 12.90 | 0.19 | 6926.59 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/3/2015 | 12.74 | 13.58 | 0.84 | 6925.91 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 3/16/2016 | 12.99 | 13.35 | 0.36 | 6926.14 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/9/2016 | 12.61 | 13.14 | 0.53 | 6926.35 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 9/11/2016 | 12.01 | 15.05 | 3.04 | 6924.44 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/3/2016 | 12.74 | 13.58 | 0.84 | 6925.91 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 3/2/2017 | 10.60 | 10.89 | 0.29 | 6928.60 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/7/2017 | 11.06 | 11.52 | 0.46 | 6927.97 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 9/26/2017 | 10.28 | 10.77 | 0.49 | 6928.72 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/28/2017 | 11.25 | 12.02 | 0.77 | 6927.47 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 2/8/2018 | 12.05 | 12.47 | 0.42 | 6927.02 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 4/25/2018 | 12.23 | 12.46 | 0.23 | 6927.03 | 6939.49 | 6942.22 | 2.73 | 14.97 | 4.0 | 14.0 |
| MKTF-05 | 8/16/2018 | 11.88 | 12.07 | 0.19 | 6927.42 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/19/2018 | 11.89 | 12.10 | 0.21 | 6927.39 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 2/19/2019 | 11.14 | 11.24 | 0.10 | 6928.25 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 5/13/2019 | 10.22 | 10.39 | 0.17 | 6929.10 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 8/30/2019 | 10.67 | 10.87 | 0.20 | 6928.62 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 10/30/2019 | 11.17 | 11.47 | 0.30 | 6928.02 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/12/2019 | 8.91 | 14.00 | 5.09 | 6925.49 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/13/2019 | 8.23 | 14.42 | 6.19 | 6925.07 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/14/2019 | 8.05 | 14.44 | 6.39 | 6925.05 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/15/2019 | 7.81 | 14.43 | 6.62 | 6925.06 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/19/2019 | 7.31 | 14.45 | 7.14 | 6925.04 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/21/2019 | 7.24 | 14.45 | 7.21 | 6925.04 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 12/2/2019 | 7.91 | 14.44 | 6.53 | 6925.05 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 3/5/2020 | 10.85 | 10.99 | 0.14 | 6928.50 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/25/2020 | 11.33 | 12.07 | 0.74 | 6927.42 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 9/15/2020 | 10.92 | 11.95 | 1.03 | 6927.54 | 6939.49 | 6942.22 | 2.73 | 15.10 | 4.0 | 14.0 |
| MKTF-05 | 11/10/2020 | 11.29 | 12.17 | 0.88 | 6927.32 | 6939.49 | 6942.22 | 2.73 | 15.10 | 4.0 | 14.0 |
| MKTF-05 | 12/3/2020 | 11.39 | 12.20 | 0.81 | 6927.29 | 6939.49 | 6942.22 | 2.73 | 15.07 | 4.0 | 14.0 |
| MKTF-05 | 1/28/2021 | 12.21 | 12.40 | 0.19 | 6927.09 | 6939.49 | 6942.22 | 2.73 | 15.07 | 4.0 | 14.0 |
| MKTF-05 | 2/28/2021 | 11.87 | 12.02 | 0.15 | 6927.47 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 3/31/2021 | 12.26 | 12.32 | 0.06 | 6927.17 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 4/26/2021 | 12.30 | 12.44 | 0.14 | 6927.05 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 5/20/2021 | 12.29 | 12.36 | 0.07 | 6927.13 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-05 | 6/1/2021 | 12.15 | 12.23 | 0.08 | 6927.26 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 9/7/2021 | 11.54 | 12.61 | 1.07 | 6926.88 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 12/3/2021 | 11.77 | 12.37 | 0.60 | 6927.12 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 1/10/2022 | 11.37 | 11.58 | 0.21 | 6927.91 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 2/28/2022 | 11.77 | 12.37 | 0.60 | 6927.12 | 6939.49 | 6942.22 | 2.73 | 15.04 | 4.0 | 14.0 |
| MKTF-05 | 3/2/2022 | 11.71 | 12.35 | 0.64 | 6927.14 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 4/27/2022 | 12.63 | 12.71 | 0.08 | 6926.78 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 5/3/2022 | 12.67 | 12.72 | 0.05 | 6926.77 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 6/2/2022 | 13.05 | 13.13 | 0.08 | 6926.36 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 7/6/2022 | 11.95 | 12.10 | 0.15 | 6927.39 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 8/8/2022 | 11.15 | 12.63 | 1.48 | 6926.86 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 9/1/2022 | 11.64 | 13.33 | 1.69 | 6926.16 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 10/3/2022 | 11.64 | 12.90 | 1.26 | 6926.59 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 11/2/2022 | 11.67 | 12.87 | 1.20 | 6926.62 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-05 | 12/9/2022 | 12.50 | 13.03 | 0.53 | 6926.46 | 6939.49 | 6942.22 | 2.73 | 15.02 | 4.0 | 14.0 |
| MKTF-06 | 1/13/2014 | 15.57 | 15.74 | 0.17 | 6928.50 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 2/13/2014 | 15.77 | 16.20 | 0.43 | 6928.04 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 3/11/2014 | 15.63 | 16.38 | 0.75 | 6927.86 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 6/6/2014 | NA | 11.43 | NA | 6932.81 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 9/15/2014 | 15.58 | 16.33 | 0.75 | 6927.91 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/14/2014 | 16.01 | NA | NA | NA | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 3/16/2015 | 15.67 | 17.37 | 1.70 | 6926.87 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 6/4/2015 | 15.99 | 16.83 | 0.84 | 6927.41 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 8/15/2015 | 14.96 | 15.82 | 0.86 | 6928.42 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/3/2015 | 15.47 | 16.21 | 0.74 | 6928.03 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 3/16/2016 | 15.67 | 17.37 | 1.70 | 6926.87 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 6/9/2016 | 15.45 | 16.39 | 0.94 | 6927.85 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 9/11/2016 | 14.83 | 15.91 | 1.08 | 6928.33 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/3/2016 | 15.47 | 16.21 | 0.74 | 6928.03 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 3/15/2017 | 13.38 | 13.48 | 0.10 | 6930.76 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 6/12/2017 | 14.03 | 14.67 | 0.64 | 6929.57 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 9/26/2017 | 13.44 | 14.15 | 0.71 | 6930.09 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/28/2017 | 13.98 | 15.13 | 1.15 | 6929.11 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 2/8/2018 | 14.57 | 15.95 | 1.38 | 6928.29 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 4/25/2018 | 14.72 | 16.04 | 1.32 | 6928.20 | 6944.24 | 6946.81 | 2.57 | 21.15 | 10.0 | 20.0 |
| MKTF-06 | 8/16/2018 | 14.26 | 15.43 | 1.17 | 6928.81 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 11/19/2018 | 14.28 | 15.44 | 1.16 | 6928.80 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 2/19/2019 | 13.22 | 13.98 | 0.76 | 6930.26 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 5/13/2019 | 12.98 | 13.82 | 0.84 | 6930.42 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 8/30/2019 | 13.25 | 14.03 | 0.78 | 6930.21 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 10/30/2019 | 14.23 | 15.34 | 1.11 | 6928.90 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/12/2019 | 13.95 | 14.91 | 0.96 | 6929.33 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/13/2019 | 13.76 | 14.61 | 0.85 | 6929.63 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/14/2019 | 13.85 | 14.74 | 0.89 | 6929.50 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/15/2019 | 13.78 | 14.63 | 0.85 | 6929.61 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/19/2019 | 13.51 | 14.26 | 0.75 | 6929.98 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 11/21/2019 | 13.36 | 14.67 | 1.31 | 6929.57 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 12/2/2019 | 12.18 | 18.79 | 6.61 | 6925.45 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-06 | 3/5/2020 | 14.32 | 16.03 | 1.71 | 6928.21 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 6/25/2020 | 11.48 | 16.33 | 4.85 | 6927.91 | 6944.24 | 6946.81 | 2.57 | 21.20 | 10.0 | 20.0 |
| MKTF-06 | 9/15/2020 | 14.21 | 16.14 | 1.93 | 6928.10 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 11/10/2020 | 14.63 | 16.02 | 1.39 | 6928.22 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 12/3/2020 | 14.81 | 15.92 | 1.11 | 6928.32 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 1/28/2021 | 15.52 | 17.08 | 1.56 | 6927.16 | 6944.24 | 6946.81 | 2.57 | 21.22 | 10.0 | 20.0 |
| MKTF-06 | 2/28/2021 | 15.36 | 16.08 | 0.72 | 6928.16 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 3/31/2021 | 15.40 | 15.58 | 0.18 | 6928.66 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 4/26/2021 | 15.31 | 15.38 | 0.07 | 6928.86 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 5/20/2021 | 15.44 | 15.56 | 0.12 | 6928.68 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 6/1/2021 | 15.52 | 15.68 | 0.16 | 6928.56 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 9/7/2021 | 15.41 | 16.09 | 0.68 | 6928.15 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 12/3/2021 | 15.44 | 16.39 | 0.95 | 6927.85 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 1/10/2022 | 14.93 | 14.96 | 0.03 | 6929.28 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 2/28/2022 | 15.18 | 15.87 | 0.69 | 6928.37 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 3/2/2022 | 15.43 | 16.38 | 0.95 | 6927.86 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 4/27/2022 | 15.96 | 17.18 | 1.22 | 6927.06 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 5/3/2022 | 16.06 | 17.32 | 1.26 | 6926.92 | 6944.24 | 6946.81 | 2.57 | 21.28 | 10.0 | 20.0 |
| MKTF-06 | 6/2/2022 | 16.23 | 17.53 | 1.30 | 6926.71 | 6944.24 | 6946.81 | 2.57 | 21.29 | 10.0 | 20.0 |
| MKTF-06 | 7/6/2022 | 14.63 | 16.48 | 1.85 | 6927.76 | 6944.24 | 6946.81 | 2.57 | 21.29 | 10.0 | 20.0 |
| MKTF-06 | 8/8/2022 | 14.87 | 16.69 | 1.82 | 6927.55 | 6944.24 | 6946.81 | 2.57 | 21.30 | 10.0 | 20.0 |
| MKTF-06 | 9/1/2022 | 15.93 | 17.16 | 1.23 | 6927.08 | 6944.24 | 6946.81 | 2.57 | 21.30 | 10.0 | 20.0 |
| MKTF-06 | 10/3/2022 | 15.97 | 17.24 | 1.27 | 6927.00 | 6944.24 | 6946.81 | 2.57 | 21.30 | 10.0 | 20.0 |
| MKTF-06 | 11/2/2022 | 15.99 | 17.26 | 1.27 | 6926.98 | 6944.24 | 6946.81 | 2.57 | 21.30 | 10.0 | 20.0 |
| MKTF-06 | 12/6/2022 | 14.98 | 16.31 | 1.33 | 6927.93 | 6944.24 | 6946.81 | 2.57 | 21.30 | 10.0 | 20.0 |
| MKTF-07 | 1/13/2014 | 9.13 | 10.23 | 1.10 | 6934.17 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 2/13/2014 | 9.10 | 10.22 | 1.12 | 6934.18 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 3/11/2014 | 8.92 | 10.07 | 1.15 | 6934.33 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 6/6/2014 | NA | 10.32 | NA | 6934.08 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 9/15/2014 | 9.22 | 10.82 | 1.60 | 6933.58 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/14/2014 | 10.54 | NA | NA | NA | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 3/16/2015 | 10.32 | 11.45 | 1.13 | 6932.95 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 6/4/2015 | 10.17 | 11.82 | 1.65 | 6932.58 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 8/18/2015 | 9.93 | 11.06 | 1.13 | 6933.34 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/3/2015 | 10.12 | 12.10 | 1.98 | 6932.30 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 3/16/2016 | 10.32 | 11.45 | 1.13 | 6932.95 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 6/9/2016 | 9.23 | 11.82 | 2.59 | 6932.58 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 9/11/2016 | 9.42 | 11.83 | 2.41 | 6932.57 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/3/2016 | 10.12 | 12.10 | 1.98 | 6932.30 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 3/15/2017 | 7.85 | 9.82 | 1.97 | 6934.58 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 6/12/2017 | 7.42 | 8.72 | 1.30 | 6935.68 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 9/26/2017 | 7.02 | 8.32 | 1.30 | 6936.08 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/28/2017 | 7.62 | 9.02 | 1.40 | 6935.38 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 2/8/2018 | 8.55 | 9.77 | 1.22 | 6934.63 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 4/25/2018 | 8.06 | 9.24 | 1.18 | 6935.16 | 6944.40 | 6947.18 | 2.78 | 14.80 | 4.0 | 14.0 |
| MKTF-07 | 8/16/2018 | 8.64 | 9.72 | 1.08 | 6934.68 | 6944.40 | 6947.18 | 2.78 | 14.69 | 4.0 | 14.0 |
| MKTF-07 | 11/27/2018 | 9.57 | 10.74 | 1.17 | 6933.66 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 2/19/2019 | 7.61 | 8.82 | 1.21 | 6935.58 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-07 | 5/13/2019 | 7.94 | 8.04 | 0.10 | 6936.36 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 8/30/2019 | 8.40 | 9.51 | 1.11 | 6934.89 | 6944.40 | 6947.18 | 2.78 | 14.69 | 4.0 | 14.0 |
| MKTF-07 | 10/30/2019 | 9.42 | 10.61 | 1.19 | 6933.79 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/12/2019 | 9.25 | 10.41 | 1.16 | 6933.99 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/13/2019 | 9.03 | 10.11 | 1.08 | 6934.29 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/14/2019 | 9.20 | 10.36 | 1.16 | 6934.04 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/15/2019 | 9.22 | 10.38 | 1.16 | 6934.02 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/19/2019 | 8.62 | 11.39 | 2.77 | 6933.01 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 11/21/2019 | 8.05 | 13.77 | 5.72 | 6930.63 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 12/2/2019 | 8.60 | 14.34 | 5.74 | 6930.06 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 3/5/2020 | 9.72 | 10.94 | 1.22 | 6933.46 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 6/25/2020 | 9.45 | 10.98 | 1.53 | 6933.42 | 6944.40 | 6947.18 | 2.78 | 14.84 | 4.0 | 14.0 |
| MKTF-07 | 9/18/2020 | 8.64 | 10.99 | 2.35 | 6933.41 | 6944.40 | 6947.18 | 2.78 | 14.65 | 4.0 | 14.0 |
| MKTF-07 | 11/10/2020 | 9.78 | 10.98 | 1.20 | 6933.42 | 6944.40 | 6947.18 | 2.78 | 14.65 | 4.0 | 14.0 |
| MKTF-07 | 12/3/2020 | 10.15 | 11.02 | 0.87 | 6933.38 | 6944.40 | 6947.18 | 2.78 | 14.88 | 4.0 | 14.0 |
| MKTF-07 | 1/28/2021 | 11.02 | 11.42 | 0.40 | 6932.98 | 6944.40 | 6947.18 | 2.78 | 14.88 | 4.0 | 14.0 |
| MKTF-07 | 2/28/2021 | 10.73 | 10.94 | 0.21 | 6933.46 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 3/31/2021 | 10.92 | 11.03 | 0.11 | 6933.37 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 4/26/2021 | 10.73 | 10.98 | 0.25 | 6933.42 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 5/20/2021 | 10.90 | 11.03 | 0.13 | 6933.37 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 6/1/2021 | 10.74 | 10.85 | 0.11 | 6933.55 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 9/7/2021 | 10.48 | 10.90 | 0.42 | 6933.50 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 12/3/2021 | 11.11 | 11.25 | 0.14 | 6933.15 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 1/10/2022 | 11.69 | 11.73 | 0.04 | 6932.67 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 2/28/2022 | ND | 11.33 | NA | 6933.07 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 3/2/2022 | 11.14 | 11.22 | 0.08 | 6933.18 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 4/27/2022 | 12.05 | 12.08 | 0.03 | 6932.32 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 5/3/2022 | 12.12 | 12.15 | 0.03 | 6932.25 | 6944.40 | 6947.18 | 2.78 | 15.08 | 4.0 | 14.0 |
| MKTF-07 | 6/2/2022 | 12.34 | 12.37 | 0.03 | 6932.03 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 7/6/2022 | 12.30 | 12.33 | 0.03 | 6932.07 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 8/8/2022 | 12.02 | 12.07 | 0.05 | 6932.33 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 9/1/2022 | 11.98 | 12.10 | 0.12 | 6932.30 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 10/3/2022 | 11.92 | 12.47 | 0.55 | 6931.93 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 11/2/2022 | 11.97 | 12.43 | 0.46 | 6931.97 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-07 | 12/9/2022 | 12.28 | 12.63 | 0.35 | 6931.77 | 6944.40 | 6947.18 | 2.78 | 15.07 | 4.0 | 14.0 |
| MKTF-08 | 1/13/2014 | 11.13 | 11.55 | 0.42 | 6932.47 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 2/13/2014 | 11.18 | 11.62 | 0.44 | 6932.40 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 3/11/2014 | 11.14 | 11.58 | 0.44 | 6932.44 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 6/6/2014 | 11.23 | 11.93 | 0.70 | 6932.09 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 9/15/2014 | 11.29 | 11.98 | 0.69 | 6932.04 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 11/14/2014 | 11.81 | NA | NA | NA | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 3/16/2015 | 11.18 | 11.43 | 0.25 | 6932.59 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 6/4/2015 | 11.28 | 11.84 | 0.56 | 6932.18 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 8/18/2015 | 10.72 | 11.68 | 0.96 | 6932.34 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 11/8/2015 | 10.77 | 12.25 | 1.48 | 6931.77 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 3/16/2016 | 11.18 | 11.43 | 0.25 | 6932.59 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 6/9/2016 | 10.41 | 11.11 | 0.70 | 6932.91 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 9/11/2016 | 10.56 | 11.22 | 0.66 | 6932.80 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-08 | 11/8/2016 | 10.77 | 12.25 | 1.48 | 6931.77 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 3/15/2017 | 8.92 | 9.53 | 0.61 | 6934.49 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 6/12/2017 | 8.91 | 9.33 | 0.42 | 6934.69 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 9/26/2017 | 9.08 | 9.53 | 0.45 | 6934.49 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 11/28/2017 | 9.61 | 10.13 | 0.52 | 6933.89 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 2/8/2018 | 10.22 | 10.56 | 0.34 | 6933.46 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 4/25/2018 | 9.93 | 10.26 | 0.33 | 6933.76 | 6944.02 | 6947.09 | 3.07 | 18.87 | 8.0 | 18.0 |
| MKTF-08 | 8/16/2018 | 9.89 | 10.28 | 0.39 | 6933.74 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 11/27/2018 | 10.34 | 10.73 | 0.39 | 6933.29 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 2/19/2019 | 8.28 | 8.93 | 0.65 | 6935.09 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 5/13/2019 | 8.88 | 9.36 | 0.48 | 6934.66 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 8/30/2019 | 9.43 | 9.83 | 0.40 | 6934.19 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 10/30/2019 | 10.47 | 10.92 | 0.45 | 6933.10 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 11/21/2019 | 10.40 | 10.78 | 0.38 | 6933.24 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 12/2/2019 | 10.65 | 11.06 | 0.41 | 6932.96 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 3/5/2020 | 10.96 | 11.30 | 0.34 | 6932.72 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 6/25/2020 | 10.93 | 11.33 | 0.40 | 6932.69 | 6944.02 | 6947.09 | 3.07 | 18.91 | 8.0 | 18.0 |
| MKTF-08 | 9/18/2020 | 10.69 | 11.08 | 0.39 | 6932.94 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 11/10/2020 | 11.16 | 11.62 | 0.46 | 6932.40 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 12/3/2020 | 11.29 | 11.69 | 0.40 | 6932.33 | 6944.02 | 6947.09 | 3.07 | 18.94 | 8.0 | 18.0 |
| MKTF-08 | 1/28/2021 | 11.77 | 12.08 | 0.31 | 6931.94 | 6944.02 | 6947.09 | 3.07 | 18.94 | 8.0 | 18.0 |
| MKTF-08 | 2/28/2021 | 11.69 | 11.82 | 0.13 | 6932.20 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 3/31/2021 | 11.53 | 11.63 | 0.10 | 6932.39 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 4/26/2021 | 11.57 | 11.68 | 0.11 | 6932.34 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 5/20/2021 | 11.56 | 11.64 | 0.08 | 6932.38 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 6/1/2021 | 11.64 | 11.72 | 0.08 | 6932.30 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 9/7/2021 | 11.70 | 11.92 | 0.22 | 6932.10 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 12/3/2021 | 11.96 | 12.30 | 0.34 | 6931.72 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 1/10/2022 | 12.13 | 12.28 | 0.15 | 6931.74 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 2/28/2022 | 11.68 | 11.73 | 0.05 | 6932.29 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 3/2/2022 | 11.93 | 12.26 | 0.33 | 6931.76 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 4/27/2022 | 12.64 | 12.93 | 0.29 | 6931.09 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 5/3/2022 | 12.71 | 13.09 | 0.38 | 6930.93 | 6944.02 | 6947.09 | 3.07 | 18.93 | 8.0 | 18.0 |
| MKTF-08 | 6/2/2022 | 12.83 | 13.61 | 0.78 | 6930.41 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 7/6/2022 | 12.69 | 13.08 | 0.39 | 6930.94 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 8/8/2022 | 12.40 | 13.08 | 0.68 | 6930.94 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 9/1/2022 | 12.29 | 13.71 | 1.42 | 6930.31 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 10/3/2022 | 11.87 | 15.31 | 3.44 | 6928.71 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 11/2/2022 | 11.88 | 15.31 | 3.43 | 6928.71 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-08 | 12/6/2022 | 12.24 | 15.24 | 3.00 | 6928.78 | 6944.02 | 6947.09 | 3.07 | 18.96 | 8.0 | 18.0 |
| MKTF-09 | 1/13/2014 | ND | 11.85 | NA | 6931.72 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 2/13/2014 | ND | 11.89 | NA | 6931.68 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 3/11/2014 | ND | 11.87 | NA | 6931.70 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/5/2014 | ND | 11.97 | NA | 6931.60 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 9/15/2014 | ND | 11.96 | NA | 6931.61 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 11/14/2014 | ND | 12.28 | NA | 6931.29 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 3/16/2015 | ND | 11.55 | NA | 6932.02 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/4/2015 | ND | 11.75 | NA | 6931.82 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-09 | 8/18/2015 | ND | 11.56 | NA | 6932.01 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 11/3/2015 | ND | 11.36 | NA | 6932.21 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 2/29/2016 | ND | 11.22 | NA | 6932.35 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/9/2016 | ND | 10.99 | NA | 6932.58 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 9/11/2016 | ND | 11.27 | NA | 6932.30 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 11/3/2016 | ND | 11.36 | NA | 6932.21 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 3/15/2017 | ND | 9.71 | NA | 6933.86 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/12/2017 | ND | 9.71 | NA | 6933.86 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 9/28/2017 | ND | 9.76 | NA | 6933.81 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 11/29/2017 | ND | 10.22 | NA | 6933.35 | 6943.57 | 6946.50 | 2.93 | 19.82 | 9.0 | 19.0 |
| MKTF-09 | 2/14/2018 | ND | 10.83 | NA | 6932.74 | 6943.57 | 6946.50 | 2.93 | 19.81 | 9.0 | 19.0 |
| MKTF-09 | 4/25/2018 | ND | 10.49 | NA | 6933.08 | 6943.57 | 6946.50 | 2.93 | 19.76 | 9.0 | 19.0 |
| MKTF-09 | 8/16/2018 | ND | 10.56 | NA | 6933.01 | 6943.57 | 6946.50 | 2.93 | 19.81 | 9.0 | 19.0 |
| MKTF-09 | 11/27/2018 | ND | 10.88 | NA | 6932.69 | 6943.57 | 6946.50 | 2.93 | 19.82 | 9.0 | 19.0 |
| MKTF-09 | 3/25/2019 | ND | 8.17 | NA | 6935.40 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 5/13/2019 | ND | 9.34 | NA | 6934.23 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 8/28/2019 | ND | 10.35 | NA | 6933.22 | 6943.57 | 6946.50 | 2.93 | 19.81 | 9.0 | 19.0 |
| MKTF-09 | 11/18/2019 | ND | 11.04 | NA | 6932.53 | 6943.57 | 6946.50 | 2.93 | 19.82 | 9.0 | 19.0 |
| MKTF-09 | 3/2/2020 | ND | 11.30 | NA | 6932.27 | 6943.57 | 6946.50 | 2.93 | 19.83 | 9.0 | 19.0 |
| MKTF-09 | 6/25/2020 | ND | 11.62 | NA | 6931.95 | 6943.57 | 6946.50 | 2.93 | 19.84 | 9.0 | 19.0 |
| MKTF-09 | 9/18/2020 | 11.26 | 11.27 | 0.01 | 6932.30 | 6943.57 | 6946.50 | 2.93 | 19.48 | 9.0 | 19.0 |
| MKTF-09 | 11/10/2020 | 11.68 | 11.69 | 0.01 | 6931.88 | 6943.57 | 6946.50 | 2.93 | 19.48 | 9.0 | 19.0 |
| MKTF-09 | 12/3/2020 | 11.82 | 11.83 | 0.01 | 6931.74 | 6943.57 | 6946.50 | 2.93 | 19.85 | 9.0 | 19.0 |
| MKTF-09 | 1/28/2021 | ND | 12.18 | NA | 6931.39 | 6943.57 | 6946.50 | 2.93 | 19.85 | 9.0 | 19.0 |
| MKTF-09 | 2/28/2021 | 11.83 | 11.96 | 0.13 | 6931.61 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 3/31/2021 | 11.92 | 11.94 | 0.02 | 6931.63 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 4/26/2021 | 11.86 | 11.91 | 0.05 | 6931.66 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 5/20/2021 | 12.05 | 12.23 | 0.18 | 6931.34 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/1/2021 | 11.99 | 12.02 | 0.03 | 6931.55 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 9/7/2021 | 12.25 | 12.28 | 0.03 | 6931.29 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 12/3/2021 | 12.16 | 12.20 | 0.04 | 6931.37 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 1/10/2022 | 12.35 | 12.38 | 0.03 | 6931.19 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 2/28/2022 | 12.19 | 12.35 | 0.16 | 6931.22 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 3/2/2022 | 12.18 | 12.22 | 0.04 | 6931.35 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 4/27/2022 | ND | 13.12 | NA | 6930.45 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 5/5/2022 | ND | 13.08 | NA | 6930.49 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 6/2/2022 | 12.20 | 12.23 | 0.03 | 6931.34 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 7/6/2022 | 12.84 | 12.87 | 0.03 | 6930.70 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 8/8/2022 | 13.09 | 13.12 | 0.03 | 6930.45 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 9/1/2022 | 12.27 | 12.31 | 0.04 | 6931.26 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 10/3/2022 | 12.22 | 12.27 | 0.05 | 6931.30 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 11/2/2022 | 12.19 | 12.26 | 0.07 | 6931.31 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-09 | 12/6/2022 | 12.39 | 12.47 | 0.08 | 6931.10 | 6943.57 | 6946.50 | 2.93 | 19.77 | 9.0 | 19.0 |
| MKTF-10 | 1/13/2014 | ND | 9.10 | NA | 6928.41 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 2/13/2014 | ND | 9.24 | NA | 6928.27 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 3/11/2014 | ND | 9.23 | NA | 6928.28 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 6/5/2014 | ND | 9.25 | NA | 6928.26 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 9/15/2014 | ND | 9.34 | NA | 6928.17 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-10 | 11/14/2014 | ND | 10.40 | NA | 6927.11 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 3/16/2015 | ND | 9.31 | NA | 6928.20 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 6/4/2015 | ND | 9.17 | NA | 6928.34 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 8/18/2015 | ND | 9.07 | NA | 6928.44 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 11/3/2015 | ND | 9.19 | NA | 6928.32 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 2/29/2016 | ND | 8.95 | NA | 6928.56 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 6/9/2016 | ND | 8.55 | NA | 6928.96 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 9/11/2016 | ND | 8.80 | NA | 6928.71 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 11/3/2016 | ND | 9.19 | NA | 6928.32 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 3/2/2017 | ND | 7.82 | NA | 6929.69 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 6/7/2017 | ND | 7.37 | NA | 6930.14 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 9/27/2017 | ND | 7.13 | NA | 6930.38 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 11/29/2017 | ND | 7.35 | NA | 6930.16 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 2/14/2018 | ND | 7.65 | NA | 6929.86 | 6937.51 | 6937.16 | -0.35 | 16.45 | 7.0 | 17.0 |
| MKTF-10 | 4/25/2018 | ND | 7.40 | NA | 6930.11 | 6937.51 | 6937.16 | -0.35 | 16.40 | 7.0 | 17.0 |
| MKTF-10 | 8/16/2018 | ND | 7.43 | NA | 6930.08 | 6937.51 | 6937.16 | -0.35 | 16.63 | 7.0 | 17.0 |
| MKTF-10 | 11/19/2018 | ND | 7.60 | NA | 6929.91 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 3/25/2019 | ND | 6.05 | NA | 6931.46 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 5/13/2019 | ND | 6.58 | NA | 6930.93 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 8/21/2019 | ND | 8.00 | NA | 6929.51 | 6937.51 | 6937.16 | -0.35 | 16.63 | 7.0 | 17.0 |
| MKTF-10 | 10/30/2019 | ND | 7.63 | NA | 6929.88 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 3/2/2020 | ND | 8.02 | NA | 6929.49 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 6/25/2020 | ND | 7.42 | NA | 6930.09 | 6937.51 | 6937.16 | -0.35 | 16.34 | 7.0 | 17.0 |
| MKTF-10 | 9/18/2020 | 7.87 | 7.88 | 0.01 | 6929.63 | 6937.51 | 6937.16 | -0.35 | 16.76 | 7.0 | 17.0 |
| MKTF-10 | 11/10/2020 | ND | 8.14 | NA | 6929.37 | 6937.51 | 6937.16 | -0.35 | 16.76 | 7.0 | 17.0 |
| MKTF-10 | 12/3/2020 | ND | 8.15 | NA | 6929.36 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 1/28/2021 | ND | 8.26 | NA | 6929.25 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 2/28/2021 | ND | 8.24 | NA | 6929.27 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 3/31/2021 | ND | 8.09 | NA | 6929.42 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 4/26/2021 | ND | 8.38 | NA | 6929.13 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 5/20/2021 | ND | 8.27 | NA | 6929.24 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 6/1/2021 | ND | 8.04 | NA | 6929.47 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 9/9/2021 | ND | 8.55 | NA | 6928.96 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 12/15/2021 | ND | 8.69 | NA | 6928.82 | 6937.51 | 6937.16 | -0.35 | 16.85 | 7.0 | 17.0 |
| MKTF-10 | 1/10/2022 | ND | 10.06 | NA | 6927.45 | 6937.51 | 6937.16 | -0.35 | 16.95 | 7.0 | 17.0 |
| MKTF-10 | 2/28/2022 | ND | 9.90 | NA | 6927.61 | 6937.51 | 6937.16 | -0.35 | 16.95 | 7.0 | 17.0 |
| MKTF-10 | 3/1/2022 | ND | 8.65 | NA | 6928.86 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 4/27/2022 | ND | 9.22 | NA | 6928.29 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 5/5/2022 | ND | 9.80 | NA | 6927.71 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 6/2/2022 | 8.55 | 8.65 | 0.10 | 6928.86 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 7/6/2022 | 8.46 | 8.71 | 0.25 | 6928.80 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 8/8/2022 | 8.18 | 8.45 | 0.27 | 6929.06 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 9/1/2022 | 8.44 | 8.56 | 0.12 | 6928.95 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 10/3/2022 | 8.48 | 8.60 | 0.12 | 6928.91 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 11/2/2022 | 8.50 | 8.58 | 0.08 | 6928.93 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-10 | 12/6/2022 | 8.55 | 8.64 | 0.09 | 6928.87 | 6937.51 | 6937.16 | -0.35 | 16.96 | 7.0 | 17.0 |
| MKTF-11 | 1/15/2014 | ND | 8.76 | NA | 6922.85 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 2/13/2014 | ND | 8.91 | NA | 6922.70 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-11 | 3/11/2014 | ND | 8.77 | NA | 6922.84 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 6/5/2014 | ND | 9.47 | NA | 6922.14 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 9/15/2014 | ND | 9.62 | NA | 6921.99 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 11/13/2014 | ND | 9.82 | NA | 6921.79 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 3/16/2015 | ND | 9.07 | NA | 6922.54 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 6/4/2015 | ND | 9.27 | NA | 6922.34 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 8/18/2015 | ND | 8.72 | NA | 6922.89 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 11/3/2015 | ND | 8.90 | NA | 6922.71 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 2/29/2016 | ND | 9.07 | NA | 6922.54 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 6/9/2016 | ND | 8.93 | NA | 6922.68 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 9/11/2016 | ND | 8.97 | NA | 6922.64 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 11/3/2016 | ND | 8.90 | NA | 6922.71 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 3/2/2017 | ND | 7.23 | NA | 6924.38 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 6/7/2017 | ND | 7.66 | NA | 6923.95 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 9/26/2017 | ND | 6.97 | NA | 6924.64 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 11/29/2017 | ND | 8.27 | NA | 6923.34 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 2/8/2018 | ND | 8.14 | NA | 6923.47 | 6931.61 | 6931.34 | -0.27 | 18.58 | 8.0 | 18.0 |
| MKTF-11 | 4/25/2018 | ND | 8.12 | NA | 6923.49 | 6931.61 | 6931.34 | -0.27 | 18.66 | 8.0 | 18.0 |
| MKTF-11 | 8/16/2018 | ND | 7.75 | NA | 6923.86 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-11 | 11/19/2018 | ND | 7.47 | NA | 6924.14 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 3/25/2019 | ND | 5.23 | NA | 6926.38 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 5/13/2019 | ND | 5.51 | NA | 6926.10 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 8/21/2019 | ND | 6.49 | NA | 6925.12 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-11 | 10/30/2019 | ND | 7.33 | NA | 6924.28 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 3/2/2020 | ND | 8.16 | NA | 6923.45 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 6/26/2020 | 7.94 | 7.95 | 0.01 | 6923.66 | 6931.61 | 6931.34 | -0.27 | 18.41 | 8.0 | 18.0 |
| MKTF-11 | 9/18/2020 | 7.86 | 7.87 | 0.01 | 6923.74 | 6931.61 | 6931.34 | -0.27 | 18.72 | 8.0 | 18.0 |
| MKTF-11 | 11/10/2020 | ND | 7.88 | NA | 6923.73 | 6931.61 | 6931.34 | -0.27 | 18.72 | 8.0 | 18.0 |
| MKTF-11 | 12/3/2020 | 8.16 | 8.18 | 0.02 | 6923.43 | 6931.61 | 6931.34 | -0.27 | 18.72 | 8.0 | 18.0 |
| MKTF-11 | 1/28/2021 | ND | 8.15 | NA | 6923.46 | 6931.61 | 6931.34 | -0.27 | 18.72 | 8.0 | 18.0 |
| MKTF-11 | 2/28/2021 | ND | 8.11 | NA | 6923.50 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 3/31/2021 | ND | 7.90 | NA | 6923.71 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 4/26/2021 | ND | 7.97 | NA | 6923.64 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 5/20/2021 | ND | 7.94 | NA | 6923.67 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 6/1/2021 | ND | 7.83 | NA | 6923.78 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 9/9/2021 | ND | 8.86 | NA | 6922.75 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 12/15/2021 | ND | 8.69 | NA | 6922.92 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 1/10/2022 | ND | 8.79 | NA | 6922.82 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 2/28/2022 | ND | 8.71 | NA | 6922.90 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 3/2/2022 | ND | 8.11 | NA | 6923.50 | 6931.61 | 6931.34 | -0.27 | 19.61 | 8.0 | 18.0 |
| MKTF-11 | 4/27/2022 | ND | 8.55 | NA | 6923.06 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 5/5/2022 | ND | 8.71 | NA | 6922.90 | 6931.61 | 6931.34 | -0.27 | 18.80 | 8.0 | 18.0 |
| MKTF-11 | 6/2/2022 | ND | 9.07 | NA | 6922.54 | 6931.61 | 6931.34 | -0.27 | 18.77 | 8.0 | 18.0 |
| MKTF-11 | 7/6/2022 | ND | 8.80 | NA | 6922.81 | 6931.61 | 6931.34 | -0.27 | 18.76 | 8.0 | 18.0 |
| MKTF-11 | 8/8/2022 | ND | 9.23 | NA | 6922.38 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-11 | 9/1/2022 | 8.92 | 8.96 | 0.04 | 6922.65 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-11 | 10/3/2022 | 8.97 | 9.01 | 0.04 | 6922.60 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-11 | 11/2/2022 | 8.98 | 9.01 | 0.03 | 6922.60 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-11 | 12/6/2022 | 9.04 | 9.09 | 0.05 | 6922.52 | 6931.61 | 6931.34 | -0.27 | 18.75 | 8.0 | 18.0 |
| MKTF-12 | 1/13/2014 | 16.85 | 17.12 | 0.27 | 6922.58 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 2/12/2014 | 17.04 | 17.46 | 0.42 | 6922.24 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 3/11/2014 | 16.74 | 17.02 | 0.28 | 6922.68 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 6/4/2014 | 17.33 | 17.41 | 0.08 | 6922.29 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 9/15/2014 | 17.40 | 18.59 | 1.19 | 6921.11 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/17/2014 | 17.79 | 18.97 | 1.18 | 6920.73 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 3/12/2015 | 16.72 | 18.53 | 1.81 | 6921.17 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 6/9/2015 | 17.06 | 19.24 | 2.18 | 6920.46 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 8/18/2015 | 17.05 | 17.58 | 0.53 | 6922.12 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/3/2015 | 17.25 | 17.86 | 0.61 | 6921.84 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 3/12/2016 | 16.72 | 18.53 | 1.81 | 6921.17 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 6/10/2016 | 15.82 | 17.14 | 1.32 | 6922.56 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 9/10/2016 | 16.82 | 17.14 | 0.32 | 6922.56 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/3/2016 | 17.25 | 17.86 | 0.61 | 6921.84 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 3/15/2017 | 15.34 | 15.40 | 0.06 | 6924.30 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 6/7/2017 | 16.19 | 16.38 | 0.19 | 6923.32 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 10/3/2017 | 14.89 | 15.02 | 0.13 | 6924.68 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/27/2017 | 16.02 | 16.15 | 0.13 | 6923.55 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 2/7/2018 | 16.70 | 16.87 | 0.17 | 6922.83 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 4/26/2018 | 16.70 | 16.82 | 0.12 | 6922.88 | 6939.70 | 6942.11 | 2.41 | 23.17 | 12.0 | 22.0 |
| MKTF-12 | 8/15/2018 | 16.60 | 16.79 | 0.19 | 6922.91 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/27/2018 | 15.99 | 16.13 | 0.14 | 6923.57 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 3/26/2019 | 14.24 | 14.59 | 0.35 | 6925.11 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 5/9/2019 | 14.84 | 14.94 | 0.10 | 6924.76 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 8/20/2019 | 15.51 | 15.60 | 0.09 | 6924.10 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 10/28/2019 | 15.94 | 16.06 | 0.12 | 6923.64 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/12/2019 | 15.73 | 15.81 | 0.08 | 6923.89 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/13/2019 | 15.61 | 15.71 | 0.10 | 6923.99 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/14/2019 | 15.70 | 15.78 | 0.08 | 6923.92 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/15/2019 | 15.69 | 15.77 | 0.08 | 6923.93 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/19/2019 | 15.59 | 15.68 | 0.09 | 6924.02 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 11/21/2019 | 15.63 | 15.79 | 0.16 | 6923.91 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 12/2/2019 | 15.29 | 15.34 | 0.05 | 6924.36 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 2/27/2020 | 15.43 | 15.51 | 0.08 | 6924.19 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 6/29/2020 | 16.72 | 16.84 | 0.12 | 6922.86 | 6939.70 | 6942.11 | 2.41 | 23.19 | 12.0 | 22.0 |
| MKTF-12 | 9/18/2020 | 16.23 | 16.24 | 0.01 | 6923.46 | 6939.70 | 6942.11 | 2.41 | 23.41 | 12.0 | 22.0 |
| MKTF-12 | 11/10/2020 | 15.56 | 15.59 | 0.03 | 6924.11 | 6939.70 | 6942.11 | 2.41 | 23.41 | 12.0 | 22.0 |
| MKTF-12 | 12/3/2020 | 16.49 | 16.65 | 0.16 | 6923.05 | 6939.70 | 6942.11 | 2.41 | 23.48 | 12.0 | 22.0 |
| MKTF-12 | 1/28/2021 | 17.05 | 17.22 | 0.17 | 6922.48 | 6939.70 | 6942.11 | 2.41 | 23.48 | 12.0 | 22.0 |
| MKTF-12 | 2/28/2021 | 16.41 | 16.51 | 0.10 | 6923.19 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 3/31/2021 | 16.18 | 16.22 | 0.04 | 6923.48 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 4/26/2021 | 16.08 | 16.19 | 0.11 | 6923.51 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 5/20/2021 | 16.29 | 16.32 | 0.03 | 6923.38 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 5/20/2021 | 16.62 | 16.67 | 0.05 | 6923.03 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 9/9/2021 | 16.60 | 16.68 | 0.08 | 6923.02 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 12/3/2021 | 16.68 | 16.79 | 0.11 | 6922.91 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 1/10/2022 | 16.48 | 16.69 | 0.21 | 6923.01 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-12 | 2/28/2022 | 16.71 | 16.79 | 0.08 | 6922.91 | 6939.70 | 6942.11 | 2.41 | 23.44 | 12.0 | 22.0 |
| MKTF-12 | 3/1/2022 | 16.71 | 16.78 | 0.07 | 6922.92 | 6939.70 | 6942.11 | 2.41 | 23.47 | 12.0 | 22.0 |
| MKTF-12 | 4/27/2022 | 17.09 | 17.14 | 0.05 | 6922.56 | 6939.70 | 6942.11 | 2.41 | 23.47 | 12.0 | 22.0 |
| MKTF-12 | 5/5/2022 | 16.92 | 17.00 | 0.08 | 6922.70 | 6939.70 | 6942.11 | 2.41 | 23.47 | 12.0 | 22.0 |
| MKTF-12 | 6/2/2022 | 16.79 | 16.86 | 0.07 | 6922.84 | 6939.70 | 6942.11 | 2.41 | 23.49 | 12.0 | 22.0 |
| MKTF-12 | 7/6/2022 | 14.40 | 14.48 | 0.08 | 6925.22 | 6939.70 | 6942.11 | 2.41 | 23.51 | 12.0 | 22.0 |
| MKTF-12 | 8/8/2022 | 15.47 | 15.54 | 0.07 | 6924.16 | 6939.70 | 6942.11 | 2.41 | 23.53 | 12.0 | 22.0 |
| MKTF-12 | 9/1/2022 | 17.02 | 17.09 | 0.07 | 6922.61 | 6939.70 | 6942.11 | 2.41 | 23.53 | 12.0 | 22.0 |
| MKTF-12 | 10/3/2022 | 17.19 | 17.34 | 0.15 | 6922.36 | 6939.70 | 6942.11 | 2.41 | 23.53 | 12.0 | 22.0 |
| MKTF-12 | 11/2/2022 | 17.22 | 17.35 | 0.13 | 6922.35 | 6939.70 | 6942.11 | 2.41 | 23.53 | 12.0 | 22.0 |
| MKTF-12 | 12/6/2022 | 17.54 | 17.70 | 0.16 | 6922.00 | 6939.70 | 6942.11 | 2.41 | 23.53 | 12.0 | 22.0 |
| MKTF-13 | 1/13/2014 | 11.29 | 11.59 | 0.30 | 6922.08 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 2/12/2014 | 11.47 | 11.81 | 0.34 | 6921.86 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 3/11/2014 | 11.16 | 11.49 | 0.33 | 6922.18 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 6/4/2014 | 13.09 | 13.74 | 0.65 | 6919.93 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 9/15/2014 | 13.10 | 14.24 | 1.14 | 6919.43 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/17/2014 | 13.42 | 14.82 | 1.40 | 6918.85 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 3/12/2015 | 12.24 | 14.31 | 2.07 | 6919.36 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 6/9/2015 | 12.71 | 14.36 | 1.65 | 6919.31 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 8/21/2015 | 12.43 | 14.11 | 1.68 | 6919.56 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/3/2015 | 12.71 | 14.04 | 1.33 | 6919.63 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 3/12/2016 | 12.24 | 14.31 | 2.07 | 6919.36 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 6/10/2016 | 11.48 | 12.68 | 1.20 | 6920.99 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 9/10/2016 | 12.37 | 13.35 | 0.98 | 6920.32 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/3/2016 | 12.71 | 14.04 | 1.33 | 6919.63 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 3/15/2017 | ND | 11.09 | NA | 6922.58 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 6/7/2017 | 11.84 | 11.90 | 0.06 | 6921.77 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 10/3/2017 | 10.40 | 10.43 | 0.03 | 6923.24 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/27/2017 | 11.63 | 11.64 | 0.01 | 6922.03 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 2/7/2018 | 12.26 | 12.27 | 0.01 | 6921.40 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 4/26/2018 | ND | 12.24 | NA | 6921.43 | 6933.67 | 6935.18 | 1.51 | 20.15 | 8.0 | 18.0 |
| MKTF-13 | 8/15/2018 | ND | 12.17 | NA | 6921.50 | 6933.67 | 6935.18 | 1.51 | 20.04 | 8.0 | 18.0 |
| MKTF-13 | 11/27/2018 | ND | 11.21 | NA | 6922.46 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 3/26/2019 | ND | 9.39 | NA | 6924.28 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 5/9/2019 | ND | 10.09 | NA | 6923.58 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 8/20/2019 | ND | 10.94 | NA | 6922.73 | 6933.67 | 6935.18 | 1.51 | 20.04 | 8.0 | 18.0 |
| MKTF-13 | 10/28/2019 | ND | 11.44 | NA | 6922.23 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/12/2019 | ND | 11.31 | NA | 6922.36 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/13/2019 | ND | 11.24 | NA | 6922.43 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/14/2019 | ND | 11.34 | NA | 6922.33 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/15/2019 | ND | 11.29 | NA | 6922.38 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/19/2019 | ND | 11.20 | NA | 6922.47 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 11/21/2019 | ND | 11.24 | NA | 6922.43 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 12/2/2019 | ND | 10.89 | NA | 6922.78 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 2/27/2020 | 9.62 | 15.80 | 6.18 | 6917.87 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 6/29/2020 | 11.16 | 16.70 | 5.54 | 6916.97 | 6933.67 | 6935.18 | 1.51 | 19.74 | 8.0 | 18.0 |
| MKTF-13 | 9/18/2020 | 11.04 | 15.41 | 4.37 | 6918.26 | 6933.67 | 6935.18 | 1.51 | 20.62 | 8.0 | 18.0 |
| MKTF-13 | 11/10/2020 | 10.47 | 14.85 | 4.38 | 6918.82 | 6933.67 | 6935.18 | 1.51 | 20.62 | 8.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-13 | 12/3/2020 | 11.33 | 15.14 | 3.81 | 6918.53 | 6933.67 | 6935.18 | 1.51 | 20.41 | 8.0 | 18.0 |
| MKTF-13 | 1/28/2021 | 11.74 | 15.75 | 4.01 | 6917.92 | 6933.67 | 6935.18 | 1.51 | 20.41 | 8.0 | 18.0 |
| MKTF-13 | 2/28/2021 | 11.09 | 15.39 | 4.30 | 6918.28 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 3/31/2021 | 10.70 | 15.14 | 4.44 | 6918.53 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 4/26/2021 | 10.74 | 14.82 | 4.08 | 6918.85 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 5/20/2021 | 10.60 | 15.19 | 4.59 | 6918.48 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 6/1/2021 | 10.42 | 14.16 | 3.74 | 6919.51 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 9/7/2021 | 11.49 | 15.09 | 3.60 | 6918.58 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 12/3/2021 | 11.96 | 14.31 | 2.35 | 6919.36 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 1/10/2022 | 9.32 | 13.27 | 3.95 | 6920.40 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 2/28/2022 | 9.29 | 13.24 | 3.95 | 6920.43 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 3/1/2022 | 11.93 | 14.27 | 2.34 | 6919.40 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 4/27/2022 | 12.46 | 13.53 | 1.07 | 6920.14 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 5/3/2022 | 12.53 | 13.56 | 1.03 | 6920.11 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 6/2/2022 | 12.28 | 13.64 | 1.36 | 6920.03 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 7/6/2022 | 12.61 | 14.15 | 1.54 | 6919.52 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 8/8/2022 | 12.11 | 13.86 | 1.75 | 6919.81 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 9/1/2022 | 12.09 | 13.60 | 1.51 | 6920.07 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 10/3/2022 | 11.87 | 13.52 | 1.65 | 6920.15 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 11/2/2022 | 11.89 | 13.49 | 1.60 | 6920.18 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-13 | 12/9/2022 | 13.37 | 14.19 | 0.82 | 6919.48 | 6933.67 | 6935.18 | 1.51 | 20.24 | 8.0 | 18.0 |
| MKTF-14 | 1/13/2014 | 5.01 | 6.62 | 1.61 | 6919.03 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 2/12/2014 | 5.23 | 6.40 | 1.17 | 6919.25 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 3/11/2014 | 4.90 | 6.05 | 1.15 | 6919.60 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 6/4/2014 | 5.54 | 6.36 | 0.82 | 6919.29 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 9/15/2014 | 5.93 | 6.38 | 0.45 | 6919.27 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 11/17/2014 | 6.20 | 6.57 | 0.37 | 6919.08 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 3/12/2015 | 5.23 | 5.78 | 0.55 | 6919.87 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 6/9/2015 | 5.63 | 6.00 | 0.37 | 6919.65 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 8/21/2015 | 5.24 | 5.66 | 0.42 | 6919.99 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 11/3/2015 | 5.34 | 5.73 | 0.39 | 6919.92 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 3/12/2016 | 5.23 | 5.78 | 0.55 | 6919.87 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 6/10/2016 | 4.76 | 7.09 | 2.33 | 6918.56 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 9/10/2016 | 4.94 | 6.63 | 1.69 | 6919.02 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 11/3/2016 | 5.34 | 5.73 | 0.39 | 6919.92 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 3/8/2017 | 3.40 | 4.38 | 0.98 | 6921.27 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 6/7/2017 | 4.31 | 5.15 | 0.84 | 6920.50 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 10/3/2017 | 3.33 | 3.74 | 0.41 | 6921.91 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 11/27/2017 | 4.19 | 4.56 | 0.37 | 6921.09 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 2/7/2018 | 4.61 | 5.02 | 0.41 | 6920.63 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 4/26/2018 | 4.64 | 5.02 | 0.38 | 6920.63 | 6925.65 | 6928.02 | 2.37 | 15.06 | 4.0 | 14.0 |
| MKTF-14 | 8/15/2018 | 4.58 | 4.93 | 0.35 | 6920.72 | 6925.65 | 6928.02 | 2.37 | 15.08 | 4.0 | 14.0 |
| MKTF-14 | 11/27/2018 | 3.89 | 4.28 | 0.39 | 6921.37 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 3/25/2019 | 1.52 | 1.88 | 0.36 | 6923.77 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 5/9/2019 | 2.28 | 2.67 | 0.39 | 6922.98 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 8/20/2019 | 3.27 | 3.55 | 0.28 | 6922.10 | 6925.65 | 6928.02 | 2.37 | 15.08 | 4.0 | 14.0 |
| MKTF-14 | 10/28/2019 | 3.65 | 4.02 | 0.37 | 6921.63 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 2/27/2020 | 2.98 | 3.28 | 0.30 | 6922.37 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-14 | 6/29/2020 | 4.01 | 6.21 | 2.20 | 6919.44 | 6925.65 | 6928.02 | 2.37 | 15.09 | 4.0 | 14.0 |
| MKTF-14 | 9/18/2020 | 3.81 | 5.79 | 1.98 | 6919.86 | 6925.65 | 6928.02 | 2.37 | 14.95 | 4.0 | 14.0 |
| MKTF-14 | 11/10/2020 | 3.61 | 3.91 | 0.30 | 6921.74 | 6925.65 | 6928.02 | 2.37 | 14.95 | 4.0 | 14.0 |
| MKTF-14 | 12/3/2020 | 4.42 | 4.69 | 0.27 | 6920.96 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 1/28/2021 | 4.74 | 5.04 | 0.30 | 6920.61 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 2/28/2021 | 4.27 | 4.61 | 0.34 | 6921.04 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 3/31/2021 | 3.77 | 3.89 | 0.12 | 6921.76 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 4/26/2021 | 3.74 | 3.81 | 0.07 | 6921.84 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 5/20/2021 | 3.83 | 3.94 | 0.11 | 6921.71 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 6/1/2021 | 3.44 | 3.60 | 0.16 | 6922.05 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 9/7/2021 | 4.65 | 4.82 | 0.17 | 6920.83 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 12/3/2021 | 4.80 | 5.02 | 0.22 | 6920.63 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 1/10/2022 | 4.83 | 5.07 | 0.24 | 6920.58 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 2/28/2022 | 4.75 | 5.05 | 0.30 | 6920.60 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 3/1/2022 | 4.78 | 4.99 | 0.21 | 6920.66 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 4/27/2022 | 4.91 | 5.14 | 0.23 | 6920.51 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 5/2/2022 | 4.92 | 5.17 | 0.25 | 6920.48 | 6925.65 | 6928.02 | 2.37 | 15.18 | 4.0 | 14.0 |
| MKTF-14 | 6/2/2022 | 4.88 | 5.39 | 0.51 | 6920.26 | 6925.65 | 6928.02 | 2.37 | 15.21 | 4.0 | 14.0 |
| MKTF-14 | 7/6/2022 | 3.72 | 3.98 | 0.26 | 6921.67 | 6925.65 | 6928.02 | 2.37 | 15.22 | 4.0 | 14.0 |
| MKTF-14 | 8/8/2022 | 4.60 | 4.61 | 0.01 | 6921.04 | 6925.65 | 6928.02 | 2.37 | 15.24 | 4.0 | 14.0 |
| MKTF-14 | 9/1/2022 | 4.81 | 4.92 | 0.11 | 6920.73 | 6925.65 | 6928.02 | 2.37 | 15.24 | 4.0 | 14.0 |
| MKTF-14 | 10/3/2022 | 4.61 | 4.77 | 0.16 | 6920.88 | 6925.65 | 6928.02 | 2.37 | 15.24 | 4.0 | 14.0 |
| MKTF-14 | 11/2/2022 | 4.64 | 4.78 | 0.14 | 6920.87 | 6925.65 | 6928.02 | 2.37 | 15.24 | 4.0 | 14.0 |
| MKTF-14 | 12/9/2022 | 5.04 | 5.18 | 0.14 | 6920.47 | 6925.65 | 6928.02 | 2.37 | 15.24 | 4.0 | 14.0 |
| MKTF-15 | 1/13/2014 | ND | 14.14 | NA | 6929.60 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 2/13/2014 | ND | 14.14 | NA | 6929.60 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 3/11/2014 | ND | 14.12 | NA | 6929.62 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 6/5/2014 | ND | 14.07 | NA | 6929.67 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 9/15/2014 | ND | 13.97 | NA | 6929.77 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 11/14/2014 | 13.76 | 14.81 | 1.05 | 6928.93 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 3/16/2015 | 13.43 | 14.18 | 0.75 | 6929.56 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 6/4/2015 | 13.46 | 14.04 | 0.58 | 6929.70 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 8/18/2015 | 13.35 | 13.60 | 0.25 | 6930.14 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 11/3/2015 | 13.16 | 13.81 | 0.65 | 6929.93 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 3/16/2016 | 13.43 | 14.18 | 0.75 | 6929.56 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 6/9/2016 | 12.86 | 13.08 | 0.22 | 6930.66 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 9/11/2016 | ND | 13.26 | NA | 6930.48 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 11/3/2016 | 13.16 | 13.81 | 0.65 | 6929.93 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 3/2/2017 | ND | 12.41 | NA | 6931.33 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 6/7/2017 | ND | 12.19 | NA | 6931.55 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 9/26/2017 | 12.26 | 12.36 | 0.10 | 6931.38 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 11/29/2017 | ND | 12.39 | NA | 6931.35 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 2/8/2018 | 12.66 | 12.73 | 0.07 | 6931.01 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 4/25/2018 | ND | 12.46 | NA | 6931.28 | 6943.74 | 6943.48 | -0.26 | 19.66 | 9.0 | 19.0 |
| MKTF-15 | 8/16/2018 | ND | 12.66 | NA | 6931.08 | 6943.74 | 6943.48 | -0.26 | 19.76 | 9.0 | 19.0 |
| MKTF-15 | 11/19/2018 | 12.83 | 12.96 | 0.13 | 6930.78 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 3/25/2019 | 11.24 | 11.26 | 0.02 | 6932.48 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 5/13/2019 | ND | 11.85 | NA | 6931.89 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-15 | 8/21/2019 | 12.28 | 12.29 | 0.01 | 6931.45 | 6943.74 | 6943.48 | -0.26 | 19.76 | 9.0 | 19.0 |
| MKTF-15 | 10/30/2019 | 12.91 | 12.96 | 0.05 | 6930.78 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 2/3/2020 | 13.28 | 13.37 | 0.09 | 6930.37 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 6/26/2020 | 13.37 | 13.43 | 0.06 | 6930.31 | 6943.74 | 6943.48 | -0.26 | 19.74 | 9.0 | 19.0 |
| MKTF-15 | 9/18/2020 | 13.26 | 13.29 | 0.03 | 6930.45 | 6943.74 | 6943.48 | -0.26 | 19.44 | 9.0 | 19.0 |
| MKTF-15 | 11/10/2020 | 13.65 | 13.86 | 0.21 | 6929.88 | 6943.74 | 6943.48 | -0.26 | 19.78 | 9.0 | 19.0 |
| MKTF-15 | 1/28/2021 | 13.80 | 14.01 | 0.21 | 6929.73 | 6943.74 | 6943.48 | -0.26 | 19.78 | 9.0 | 19.0 |
| MKTF-15 | 2/28/2021 | 13.71 | 13.78 | 0.07 | 6929.96 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 3/31/2021 | 13.65 | 13.68 | 0.03 | 6930.06 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 4/26/2021 | 13.37 | 13.58 | 0.21 | 6930.16 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 5/20/2021 | 13.77 | 13.84 | 0.07 | 6929.90 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 6/1/2021 | 13.69 | 13.73 | 0.04 | 6930.01 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 9/7/2021 | 13.55 | 14.17 | 0.62 | 6929.57 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 12/3/2021 | 13.53 | 14.22 | 0.69 | 6929.52 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 1/10/2022 | 13.38 | 14.14 | 0.76 | 6929.60 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 2/28/2022 | 13.38 | 14.13 | 0.75 | 6929.61 | 6943.74 | 6943.48 | -0.26 | 19.79 | 9.0 | 19.0 |
| MKTF-15 | 3/2/2022 | 13.56 | 14.26 | 0.70 | 6929.48 | 6943.74 | 6943.48 | -0.26 | 19.81 | 9.0 | 19.0 |
| MKTF-15 | 4/27/2022 | 13.66 | 15.61 | 1.95 | 6928.13 | 6943.74 | 6943.48 | -0.26 | 19.81 | 9.0 | 19.0 |
| MKTF-15 | 5/5/2022 | 13.59 | 14.68 | 1.09 | 6929.06 | 6943.74 | 6943.48 | -0.26 | 19.81 | 9.0 | 19.0 |
| MKTF-15 | 6/2/2022 | 13.47 | 14.11 | 0.64 | 6929.63 | 6943.74 | 6943.48 | -0.26 | 19.87 | 9.0 | 19.0 |
| MKTF-15 | 7/6/2022 | 12.21 | 12.82 | 0.61 | 6930.92 | 6943.74 | 6943.48 | -0.26 | 19.89 | 9.0 | 19.0 |
| MKTF-15 | 8/8/2022 | 12.59 | 13.16 | 0.57 | 6930.58 | 6943.74 | 6943.48 | -0.26 | 19.92 | 9.0 | 19.0 |
| MKTF-15 | 9/1/2022 | 13.80 | 14.96 | 1.16 | 6928.78 | 6943.74 | 6943.48 | -0.26 | 19.92 | 9.0 | 19.0 |
| MKTF-15 | 10/3/2022 | 13.95 | 14.75 | 0.80 | 6928.99 | 6943.74 | 6943.48 | -0.26 | 19.92 | 9.0 | 19.0 |
| MKTF-15 | 11/2/2022 | 13.96 | 14.71 | 0.75 | 6929.03 | 6943.74 | 6943.48 | -0.26 | 19.92 | 9.0 | 19.0 |
| MKTF-15 | 12/6/2022 | 14.22 | 14.85 | 0.63 | 6928.89 | 6943.74 | 6943.48 | -0.26 | 19.92 | 9.0 | 19.0 |
| MKTF-16 | 1/13/2014 | ND | 9.87 | NA | 6941.13 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 2/13/2014 | ND | 10.05 | NA | 6940.95 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 3/11/2014 | ND | 10.08 | NA | 6940.92 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 6/5/2014 | ND | 10.94 | NA | 6940.06 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 9/15/2014 | ND | 11.02 | NA | 6939.98 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 11/18/2014 | ND | 12.08 | NA | 6938.92 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 3/16/2015 | ND | 11.35 | NA | 6939.65 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 6/8/2015 | ND | 9.28 | NA | 6941.72 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 8/23/2015 | ND | 10.21 | NA | 6940.79 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 11/3/2015 | ND | 9.91 | NA | 6941.09 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 2/29/2016 | ND | 10.32 | NA | 6940.68 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 6/8/2016 | ND | 10.00 | NA | 6941.00 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 9/11/2016 | ND | 10.07 | NA | 6940.93 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 11/3/2016 | ND | 9.91 | NA | 6941.09 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 3/14/2017 | ND | 7.87 | NA | 6943.13 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 6/7/2017 | ND | 8.08 | NA | 6942.92 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 9/26/2017 | ND | 8.42 | NA | 6942.58 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 11/28/2017 | ND | 8.64 | NA | 6942.36 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 2/14/2018 | ND | 9.22 | NA | 6941.78 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 4/25/2018 | ND | 8.77 | NA | 6942.23 | 6951.00 | 6950.58 | -0.42 | 14.38 | 4.0 | 14.0 |
| MKTF-16 | 8/16/2018 | ND | 8.97 | NA | 6942.03 | 6951.00 | 6950.58 | -0.42 | 14.50 | 4.0 | 14.0 |
| MKTF-16 | 11/29/2018 | ND | 9.96 | NA | 6941.04 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-16 | 2/20/2019 | ND | 7.47 | NA | 6943.53 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 5/13/2019 | ND | 8.77 | NA | 6942.23 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 8/21/2019 | ND | 9.64 | NA | 6941.36 | 6951.00 | 6950.58 | -0.42 | 14.50 | 4.0 | 14.0 |
| MKTF-16 | 10/30/2019 | ND | 10.31 | NA | 6940.69 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 2/5/2020 | ND | 10.10 | NA | 6940.90 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 6/26/2020 | ND | 9.96 | NA | 6941.04 | 6951.00 | 6950.58 | -0.42 | 14.52 | 4.0 | 14.0 |
| MKTF-16 | 9/18/2020 | 9.60 | 9.61 | 0.01 | 6941.39 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 11/10/2020 | ND | 7.62 | NA | 6943.38 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 12/8/2020 | ND | 10.12 | NA | 6940.88 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 1/28/2021 | ND | 6.57 | NA | 6944.43 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 2/28/2021 | ND | 9.26 | NA | 6941.74 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 3/31/2021 | ND | 9.73 | NA | 6941.27 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 4/26/2021 | ND | 9.93 | NA | 6941.07 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 5/20/2021 | ND | 9.82 | NA | 6941.18 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 6/1/2021 | ND | 9.70 | NA | 6941.30 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 6/23/2021 | ND | Dry | NA | Dry | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 9/8/2021 | ND | 9.12 | NA | 6941.88 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 12/21/2021 | ND | 8.87 | NA | 6942.13 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 1/10/2022 | ND | 8.82 | NA | 6942.18 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 2/28/2022 | ND | 9.05 | NA | 6941.95 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 3/2/2022 | ND | 8.84 | NA | 6942.16 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 4/27/2022 | ND | 10.24 | NA | 6940.76 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 5/5/2022 | ND | 9.06 | NA | 6941.94 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-16 | 6/1/2022 | ND | 8.25 | NA | 6942.75 | 6951.00 | 6950.58 | -0.42 | 11.36 | 4.0 | 14.0 |
| MKTF-16 | 7/6/2022 | ND | 8.29 | NA | 6942.71 | 6951.00 | 6950.58 | -0.42 | 11.37 | 4.0 | 14.0 |
| MKTF-16 | 8/8/2022 | ND | 8.46 | NA | 6942.54 | 6951.00 | 6950.58 | -0.42 | 11.38 | 4.0 | 14.0 |
| MKTF-16 | 9/2/2022 | ND | 8.22 | NA | 6942.78 | 6951.00 | 6950.58 | -0.42 | 11.36 | 4.0 | 14.0 |
| MKTF-16 | 10/3/2022 | ND | 8.28 | NA | 6942.72 | 6951.00 | 6950.58 | -0.42 | 11.36 | 4.0 | 14.0 |
| MKTF-16 | 11/2/2022 | ND | 8.26 | NA | 6942.74 | 6951.00 | 6950.58 | -0.42 | 11.36 | 4.0 | 14.0 |
| MKTF-16 | 12/6/2022 | ND | 10.74 | NA | 6940.26 | 6951.00 | 6950.58 | -0.42 | 11.34 | 4.0 | 14.0 |
| MKTF-17 | 1/13/2014 | ND | 8.84 | NA | 6936.95 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 2/13/2014 | ND | 9.84 | NA | 6935.95 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 3/11/2014 | ND | 10.03 | NA | 6935.76 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 6/6/2014 | ND | 11.31 | NA | 6934.48 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 9/15/2014 | ND | 11.30 | NA | 6934.49 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 11/18/2014 | ND | 12.78 | NA | 6933.01 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 3/12/2015 | ND | 12.84 | NA | 6932.95 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 6/8/2015 | ND | 13.43 | NA | 6932.36 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 8/18/2015 | ND | 12.01 | NA | 6933.78 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 11/3/2015 | ND | 12.37 | NA | 6933.42 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 2/25/2016 | ND | 11.85 | NA | 6933.94 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 6/10/2016 | ND | 11.33 | NA | 6934.46 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 9/12/2016 | ND | 12.43 | NA | 6933.36 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 11/3/2016 | ND | 12.37 | NA | 6933.42 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 3/8/2017 | ND | 8.23 | NA | 6937.56 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 6/14/2017 | ND | 10.01 | NA | 6935.78 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 9/26/2017 | ND | 9.36 | NA | 6936.43 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 11/30/2017 | ND | 13.71 | NA | 6932.08 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-17 | 2/15/2018 | ND | 11.68 | NA | 6934.11 | 6945.79 | 6945.76 | -0.03 | 24.71 | 14.0 | 24.0 |
| MKTF-17 | 4/26/2018 | ND | 12.31 | NA | 6933.48 | 6945.79 | 6945.76 | -0.03 | 24.58 | 14.0 | 24.0 |
| MKTF-17 | 8/15/2018 | ND | 12.53 | NA | 6933.26 | 6945.79 | 6945.76 | -0.03 | 24.71 | 14.0 | 24.0 |
| MKTF-17 | 11/27/2018 | ND | 13.68 | NA | 6932.11 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 3/25/2019 | ND | 10.73 | NA | 6935.06 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 5/9/2019 | ND | 14.08 | NA | 6931.71 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 8/19/2019 | ND | 10.82 | NA | 6934.97 | 6945.79 | 6945.76 | -0.03 | 24.71 | 14.0 | 24.0 |
| MKTF-17 | 10/28/2019 | ND | 9.03 | NA | 6936.76 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 10/29/2019 | ND | 15.23 | NA | 6930.56 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 11/12/2019 | ND | 11.89 | NA | 6933.90 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 11/19/2019 | 12.38 | 13.98 | 1.60 | 6931.81 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 11/21/2019 | 12.45 | 15.33 | 2.88 | 6930.46 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 12/2/2019 | 13.20 | 18.08 | 4.88 | 6927.71 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 2/3/2020 | 11.47 | 16.88 | 5.41 | 6928.91 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 6/29/2020 | 10.22 | 15.53 | 5.31 | 6930.26 | 6945.79 | 6945.76 | -0.03 | 24.14 | 14.0 | 24.0 |
| MKTF-17 | 9/14/2020 | 10.03 | 15.40 | 5.37 | 6930.39 | 6945.79 | 6945.76 | -0.03 | 24.70 | 14.0 | 24.0 |
| MKTF-17 | 11/10/2020 | 11.42 | 11.62 | 0.20 | 6934.17 | 6945.79 | 6945.76 | -0.03 | 24.70 | 14.0 | 24.0 |
| MKTF-17 | 12/4/2020 | 11.31 | 11.50 | 0.19 | 6934.29 | 6945.79 | 6945.76 | -0.03 | 24.69 | 14.0 | 24.0 |
| MKTF-17 | 1/28/2021 | 11.91 | 11.93 | 0.02 | 6933.86 | 6945.79 | 6945.76 | -0.03 | 24.68 | 14.0 | 24.0 |
| MKTF-17 | 2/28/2021 | 11.91 | 11.93 | 0.02 | 6933.86 | 6945.79 | 6945.76 | -0.03 | 24.73 | 14.0 | 24.0 |
| MKTF-17 | 3/31/2021 | 12.09 | 12.12 | 0.03 | 6933.67 | 6945.79 | 6945.76 | -0.03 | 24.73 | 14.0 | 24.0 |
| MKTF-17 | 4/26/2021 | 15.00 | 15.02 | 0.02 | 6930.77 | 6945.79 | 6945.76 | -0.03 | 24.73 | 14.0 | 24.0 |
| MKTF-17 | 5/20/2021 | 15.06 | 15.09 | 0.03 | 6930.70 | 6945.79 | 6945.76 | -0.03 | 24.73 | 14.0 | 24.0 |
| MKTF-17 | 6/1/2021 | 15.13 | 15.18 | 0.05 | 6930.61 | 6945.79 | 6945.76 | -0.03 | 24.73 | 14.0 | 24.0 |
| MKTF-17R | 8/30/2021 | ND | 12.34 | NA | NA | 6950.61 | NA | -0.41 | NA | 5.0 | 20.0 |
| MKTF-17R | 12/3/2021 | ND | 12.80 | NA | 6937.81 | 6950.61 | 6950.20 | -0.41 | NA | 5.0 | 20.0 |
| MKTF-17R | 1/10/2022 | ND | 12.72 | NA | 6937.89 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 2/28/2022 | ND | 12.71 | NA | 6937.90 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 3/1/2022 | ND | 12.76 | NA | 6937.85 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 4/27/2022 | ND | 13.82 | NA | 6936.79 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 5/4/2022 | 13.39 | 13.86 | 0.47 | 6936.75 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 6/1/2022 | 13.64 | 13.84 | 0.20 | 6936.77 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 7/6/2022 | 13.65 | 13.88 | 0.23 | 6936.73 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 8/8/2022 | 13.42 | 13.59 | 0.17 | 6937.02 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 9/5/2022 | 13.34 | 13.54 | 0.20 | 6937.07 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 10/3/2022 | 13.03 | 13.18 | 0.15 | 6937.43 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 11/2/2022 | 13.03 | 13.20 | 0.17 | 6937.41 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-17R | 12/6/2022 | 12.91 | 13.01 | 0.10 | 6937.60 | 6950.61 | 6950.20 | -0.41 | 20.91 | 5.0 | 20.0 |
| MKTF-18 | 1/13/2014 | ND | 8.65 | NA | 6942.32 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 2/13/2014 | ND | 8.65 | NA | 6942.32 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 3/11/2014 | ND | 8.41 | NA | 6942.56 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 6/6/2014 | ND | 8.77 | NA | 6942.20 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 9/15/2014 | ND | 9.13 | NA | 6941.84 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 11/18/2014 | ND | 9.78 | NA | 6941.19 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 3/17/2015 | ND | 9.24 | NA | 6941.73 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 6/8/2015 | ND | 9.18 | NA | 6941.79 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 8/18/2015 | ND | 9.15 | NA | 6941.82 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 11/3/2015 | ND | 8.84 | NA | 6942.13 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-18 | 2/26/2016 | ND | 8.66 | NA | 6942.31 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 6/10/2016 | ND | 12.17 | NA | 6938.80 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 9/12/2016 | ND | 8.07 | NA | 6942.90 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 11/3/2016 | ND | 8.84 | NA | 6942.13 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 3/1/2017 | ND | 8.13 | NA | 6942.84 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 6/14/2017 | ND | 6.62 | NA | 6944.35 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 9/27/2017 | 6.67 | 6.69 | 0.02 | 6944.28 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 11/30/2017 | 6.61 | 6.62 | 0.01 | 6944.35 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 2/15/2018 | ND | 6.79 | NA | 6944.18 | 6950.97 | 6950.65 | -0.32 | 27.12 | 17.0 | 27.0 |
| MKTF-18 | 4/26/2018 | ND | 8.54 | NA | 6942.43 | 6950.97 | 6950.65 | -0.32 | 27.02 | 17.0 | 27.0 |
| MKTF-18 | 8/16/2018 | ND | 7.44 | NA | 6943.53 | 6950.97 | 6950.65 | -0.32 | 27.77 | 17.0 | 27.0 |
| MKTF-18 | 11/27/2018 | ND | 8.26 | NA | 6942.71 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 3/25/2019 | ND | 7.64 | NA | 6943.33 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 5/16/2019 | ND | 7.86 | NA | 6943.11 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 8/19/2019 | 8.03 | 8.04 | 0.01 | 6942.93 | 6950.97 | 6950.65 | -0.32 | 27.77 | 17.0 | 27.0 |
| MKTF-18 | 10/28/2019 | ND | 8.11 | NA | 6942.86 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 10/29/2019 | ND | 8.62 | NA | 6942.35 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 11/12/2019 | ND | 8.51 | NA | 6942.46 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 2/5/2020 | ND | 9.42 | NA | 6941.55 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 6/30/2020 | ND | 9.30 | NA | 6941.67 | 6950.97 | 6950.65 | -0.32 | 25.70 | 17.0 | 27.0 |
| MKTF-18 | 9/18/2020 | 8.81 | 8.82 | 0.01 | 6942.15 | 6950.97 | 6950.65 | -0.32 | 22.05 | 17.0 | 27.0 |
| MKTF-18 | 11/10/2020 | ND | 9.06 | NA | 6941.91 | 6950.97 | 6950.65 | -0.32 | 22.05 | 17.0 | 27.0 |
| MKTF-18 | 12/4/2020 | ND | 9.12 | NA | 6941.85 | 6950.97 | 6950.65 | -0.32 | 25.82 | 17.0 | 27.0 |
| MKTF-18 | 1/28/2021 | ND | 9.60 | NA | 6941.37 | 6950.97 | 6950.65 | -0.32 | 25.82 | 17.0 | 27.0 |
| MKTF-18 | 2/28/2021 | ND | 9.40 | NA | 6941.57 | 6950.97 | 6950.65 | -0.32 | 27.87 | 17.0 | 27.0 |
| MKTF-18 | 3/31/2021 | ND | 9.62 | NA | 6941.35 | 6950.97 | 6950.65 | -0.32 | 27.87 | 17.0 | 27.0 |
| MKTF-18 | 4/26/2021 | ND | 9.55 | NA | 6941.42 | 6950.97 | 6950.65 | -0.32 | 27.87 | 17.0 | 27.0 |
| MKTF-18 | 5/20/2021 | ND | 9.57 | NA | 6941.40 | 6950.97 | 6950.65 | -0.32 | 27.87 | 17.0 | 27.0 |
| MKTF-18 | 6/1/2021 | ND | 9.53 | NA | 6941.44 | 6950.97 | 6950.65 | -0.32 | 27.87 | 17.0 | 27.0 |
| MKTF-18R | 8/30/2021 | ND | 10.00 | NA | NA | 6955.29 | NA | -0.42 | NA | 5.0 | 25.0 |
| MKTF-18R | 12/1/2021 | ND | 10.62 | NA | 6944.67 | 6955.29 | 6954.87 | -0.42 | NA | 5.0 | 25.0 |
| MKTF-18R | 1/10/2022 | ND | 10.75 | NA | 6944.54 | 6955.29 | 6954.87 | -0.42 | 25.92 | 5.0 | 25.0 |
| MKTF-18R | 2/28/2022 | ND | 10.75 | NA | 6944.54 | 6955.29 | 6954.87 | -0.42 | 25.92 | 5.0 | 25.0 |
| MKTF-18R | 3/1/2022 | ND | 10.59 | NA | 6944.70 | 6955.29 | 6954.87 | -0.42 | 25.92 | 5.0 | 25.0 |
| MKTF-18R | 4/27/2022 | ND | 11.20 | NA | 6944.09 | 6955.29 | 6954.87 | -0.42 | 25.92 | 5.0 | 25.0 |
| MKTF-18R | 5/5/2022 | ND | 11.33 | NA | 6943.96 | 6955.29 | 6954.87 | -0.42 | 25.92 | 5.0 | 25.0 |
| MKTF-18R | 6/1/2022 | ND | 11.55 | NA | 6943.74 | 6955.29 | 6954.87 | -0.42 | 25.89 | 5.0 | 25.0 |
| MKTF-18R | 7/6/2022 | ND | 11.19 | NA | 6944.10 | 6955.29 | 6954.87 | -0.42 | 25.88 | 5.0 | 25.0 |
| MKTF-18R | 8/8/2022 | ND | 11.76 | NA | 6943.53 | 6955.29 | 6954.87 | -0.42 | 25.87 | 5.0 | 25.0 |
| MKTF-18R | 9/1/2022 | ND | 11.27 | NA | 6944.02 | 6955.29 | 6954.87 | -0.42 | 25.89 | 5.0 | 25.0 |
| MKTF-18R | 10/3/2022 | ND | 11.34 | NA | 6943.95 | 6955.29 | 6954.87 | -0.42 | 25.89 | 5.0 | 25.0 |
| MKTF-18R | 11/2/2022 | ND | 11.32 | NA | 6943.97 | 6955.29 | 6954.87 | -0.42 | 25.89 | 5.0 | 25.0 |
| MKTF-18R | 12/5/2022 | ND | 11.12 | NA | 6944.17 | 6955.29 | 6954.87 | -0.42 | 25.88 | 5.0 | 25.0 |
| MKTF-19 | 6/4/2014 | ND | 12.13 | NA | 6932.76 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 9/24/2014 | ND | 12.69 | NA | 6932.20 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 11/18/2014 | ND | 13.98 | NA | 6930.91 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 3/12/2015 | ND | 13.17 | NA | 6931.72 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 6/8/2015 | ND | 12.98 | NA | 6931.91 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-19 | 8/18/2015 | ND | 12.82 | NA | 6932.07 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 11/3/2015 | ND | 13.06 | NA | 6931.83 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 2/25/2016 | ND | 12.84 | NA | 6932.05 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 6/10/2016 | ND | 12.12 | NA | 6932.77 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 9/12/2016 | ND | 11.47 | NA | 6933.42 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 11/3/2016 | ND | 13.06 | NA | 6931.83 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 3/8/2017 | ND | 10.04 | NA | 6934.85 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 6/14/2017 | ND | 10.80 | NA | 6934.09 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 9/26/2017 | ND | 11.22 | NA | 6933.67 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 11/30/2017 | ND | 11.92 | NA | 6932.97 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 2/15/2018 | ND | 12.22 | NA | 6932.67 | 6944.89 | 6944.67 | -0.22 | 18.67 | 10.0 | 20.0 |
| MKTF-19 | 4/26/2018 | ND | 12.27 | NA | 6932.62 | 6944.89 | 6944.67 | -0.22 | 18.41 | 10.0 | 20.0 |
| MKTF-19 | 8/15/2018 | ND | 12.42 | NA | 6932.47 | 6944.89 | 6944.67 | -0.22 | 19.52 | 10.0 | 20.0 |
| MKTF-19 | 11/27/2018 | ND | 12.59 | NA | 6932.30 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 3/25/2019 | ND | 11.62 | NA | 6933.27 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 5/9/2019 | ND | 11.53 | NA | 6933.36 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 8/19/2019 | ND | 11.28 | NA | 6933.61 | 6944.89 | 6944.67 | -0.22 | 19.52 | 10.0 | 20.0 |
| MKTF-19 | 10/28/2019 | ND | 11.13 | NA | 6933.76 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 10/29/2019 | ND | 15.98 | NA | 6928.91 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 11/12/2019 | ND | 11.07 | NA | 6933.82 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 11/19/2019 | ND | 11.12 | NA | 6933.77 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 11/21/2019 | ND | 11.27 | NA | 6933.62 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 12/2/2019 | 11.85 | 12.72 | 0.87 | 6932.17 | 6944.89 | 6944.67 | -0.22 | 18.42 | 10.0 | 20.0 |
| MKTF-19 | 2/3/2020 | 11.57 | 12.62 | 1.05 | 6932.27 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 6/29/2020 | 12.30 | 13.51 | 1.21 | 6931.38 | 6944.89 | 6944.67 | -0.22 | 17.69 | 10.0 | 20.0 |
| MKTF-19 | 9/14/2020 | 12.17 | 12.19 | 0.02 | 6932.70 | 6944.89 | 6944.67 | -0.22 | 19.46 | 10.0 | 20.0 |
| MKTF-19 | 11/10/2020 | 12.44 | 13.77 | 1.33 | 6931.12 | 6944.89 | 6944.67 | -0.22 | 19.46 | 10.0 | 20.0 |
| MKTF-19 | 12/4/2020 | 12.40 | 13.64 | 1.24 | 6931.25 | 6944.89 | 6944.67 | -0.22 | 19.60 | 10.0 | 20.0 |
| MKTF-19 | 1/28/2021 | 12.44 | 13.68 | 1.24 | 6931.21 | 6944.89 | 6944.67 | -0.22 | 19.60 | 10.0 | 20.0 |
| MKTF-19 | 2/28/2021 | 12.67 | 13.81 | 1.14 | 6931.08 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 3/31/2021 | 12.82 | 14.05 | 1.23 | 6930.84 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 4/26/2021 | 12.76 | 14.29 | 1.53 | 6930.60 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 5/20/2021 | 12.50 | 13.92 | 1.42 | 6930.97 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 6/1/2021 | 12.77 | 13.99 | 1.22 | 6930.90 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 9/8/2021 | 13.27 | 14.33 | 1.06 | 6930.56 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 12/3/2021 | 13.20 | 14.25 | 1.05 | 6930.64 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 1/10/2022 | 13.33 | 13.39 | 0.06 | 6931.50 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 2/28/2022 | 13.32 | 14.54 | 1.22 | 6930.35 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 3/2/2022 | 13.22 | 14.32 | 1.10 | 6930.57 | 6944.89 | 6944.67 | -0.22 | 19.68 | 10.0 | 20.0 |
| MKTF-19 | 4/27/2022 | 13.96 | 15.05 | 1.09 | 6929.84 | 6944.89 | 6944.67 | -0.22 | 19.68 | 10.0 | 20.0 |
| MKTF-19 | 5/5/2022 | 13.53 | 14.55 | 1.02 | 6930.34 | 6944.89 | 6944.67 | -0.22 | 19.68 | 10.0 | 20.0 |
| MKTF-19 | 6/1/2022 | 13.18 | 14.10 | 0.92 | 6930.79 | 6944.89 | 6944.67 | -0.22 | 19.67 | 10.0 | 20.0 |
| MKTF-19 | 7/6/2022 | 12.63 | 13.22 | 0.59 | 6931.67 | 6944.89 | 6944.67 | -0.22 | 19.67 | 10.0 | 20.0 |
| MKTF-19 | 8/8/2022 | 12.27 | 13.44 | 1.17 | 6931.45 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 9/1/2022 | 13.25 | 14.22 | 0.97 | 6930.67 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 10/3/2022 | 13.93 | 16.28 | 2.35 | 6928.61 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 11/2/2022 | 13.92 | 16.26 | 2.34 | 6928.63 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |
| MKTF-19 | 12/6/2022 | 15.34 | 15.66 | 0.32 | 6929.23 | 6944.89 | 6944.67 | -0.22 | 19.66 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-20 | 6/4/2014 | ND | 8.02 | NA | 6943.87 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 9/23/2014 | ND | 8.49 | NA | 6943.40 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 11/18/2014 | ND | 8.51 | NA | 6943.38 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 3/16/2015 | ND | 7.37 | NA | 6944.52 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 6/8/2015 | ND | 8.00 | NA | 6943.89 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 8/23/2015 | ND | 7.90 | NA | 6943.99 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 11/9/2015 | ND | 7.89 | NA | 6944.00 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 2/29/2016 | ND | 7.92 | NA | 6943.97 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 6/8/2016 | ND | 7.34 | NA | 6944.55 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 9/11/2016 | ND | 7.76 | NA | 6944.13 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 11/9/2016 | ND | 7.89 | NA | 6944.00 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 3/14/2017 | ND | 5.81 | NA | 6946.08 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 6/12/2017 | ND | 5.68 | NA | 6946.21 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 9/26/2017 | ND | 6.34 | NA | 6945.55 | 6951.89 | 6951.78 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-20 | 11/28/2017 | ND | 6.64 | NA | 6945.25 | 6951.89 | 6951.78 | -0.11 | 9.69 | 1.0 | 9.8 |
| MKTF-20 | 2/14/2018 | ND | 7.56 | NA | 6944.33 | 6951.89 | 6951.78 | -0.11 | 9.66 | 1.0 | 9.8 |
| MKTF-20 | 4/25/2018 | ND | 7.01 | NA | 6944.88 | 6951.89 | 6951.78 | -0.11 | 9.61 | 1.0 | 9.8 |
| MKTF-20 | 8/16/2018 | ND | 7.31 | NA | 6944.58 | 6951.89 | 6951.78 | -0.11 | 9.67 | 1.0 | 9.8 |
| MKTF-20 | 11/29/2018 | ND | 7.63 | NA | 6944.26 | 6951.89 | 6951.78 | -0.11 | 9.69 | 1.0 | 9.8 |
| MKTF-20 | 2/20/2019 | ND | 6.40 | NA | 6945.49 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 5/13/2019 | ND | 7.25 | NA | 6944.64 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 8/20/2019 | ND | 8.14 | NA | 6943.75 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 11/4/2019 | ND | 7.79 | NA | 6944.10 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 2/5/2020 | ND | 9.13 | NA | 6942.76 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 6/26/2020 | ND | 8.78 | NA | 6943.11 | 6951.89 | 6951.78 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-20 | 9/15/2020 | 8.65 | 9.46 | 0.81 | 6942.43 | 6951.89 | 6951.78 | -0.11 | 9.73 | 1.0 | 9.8 |
| MKTF-20 | 11/10/2020 | 8.21 | 9.01 | 0.80 | 6942.88 | 6951.89 | 6951.78 | -0.11 | 9.73 | 1.0 | 9.8 |
| MKTF-20 | 12/8/2020 | 8.87 | 9.06 | 0.19 | 6942.83 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 1/28/2021 | 9.10 | 9.71 | 0.61 | 6942.18 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 2/28/2021 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 3/31/2021 | 9.06 | 9.34 | 0.28 | 6942.55 | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 4/26/2021 | 9.25 | 9.54 | 0.29 | 6942.35 | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 5/20/2021 | 9.01 | 9.28 | 0.27 | 6942.61 | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 6/1/2021 | 9.12 | 9.41 | 0.29 | 6942.48 | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 9/8/2021 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 12/2/2021 | ND | 9.03 | NA | 6942.86 | 6951.89 | 6951.78 | -0.11 | 9.72 | 1.0 | 9.8 |
| MKTF-20 | 1/10/2022 | ND | 9.62 | NA | 6942.27 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 2/28/2022 | ND | 9.60 | NA | 6942.29 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 3/2/2022 | ND | 9.53 | NA | 6942.36 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 4/27/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 5/5/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 6/1/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 7/6/2022 | ND | 8.41 | NA | 6943.48 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 8/8/2022 | ND | 8.90 | NA | 6942.99 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 9/1/2022 | ND | 8.90 | NA | 6942.99 | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 10/3/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 11/2/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |
| MKTF-20 | 12/6/2022 | ND | Dry | NA | Dry | 6951.89 | 6951.78 | -0.11 | 9.71 | 1.0 | 9.8 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-21 | 6/4/2014 | ND | 7.79 | NA | 6944.89 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 9/23/2014 | ND | 8.50 | NA | 6944.18 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 11/18/2014 | ND | 8.11 | NA | 6944.57 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 3/16/2015 | ND | 7.73 | NA | 6944.95 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 6/10/2015 | ND | 8.07 | NA | 6944.61 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 8/23/2015 | ND | 7.73 | NA | 6944.95 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 11/9/2015 | ND | 7.57 | NA | 6945.11 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 2/29/2016 | ND | 7.35 | NA | 6945.33 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 6/8/2016 | ND | 7.09 | NA | 6945.59 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 9/11/2016 | ND | 7.73 | NA | 6944.95 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 11/9/2016 | ND | 7.57 | NA | 6945.11 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 3/14/2017 | ND | 5.61 | NA | 6947.07 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 6/21/2017 | ND | 5.20 | NA | 6947.48 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 9/26/2017 | ND | 5.80 | NA | 6946.88 | 6952.68 | 6952.57 | -0.11 | 10.00 | 1.0 | 9.8 |
| MKTF-21 | 11/28/2017 | ND | 6.36 | NA | 6946.32 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 2/14/2018 | ND | 6.99 | NA | 6945.69 | 6952.68 | 6952.57 | -0.11 | 8.91 | 1.0 | 9.8 |
| MKTF-21 | 4/25/2018 | ND | 6.43 | NA | 6946.25 | 6952.68 | 6952.57 | -0.11 | 8.86 | 1.0 | 9.8 |
| MKTF-21 | 8/16/2018 | ND | 6.16 | NA | 6946.52 | 6952.68 | 6952.57 | -0.11 | 8.91 | 1.0 | 9.8 |
| MKTF-21 | 11/29/2018 | ND | 7.63 | NA | 6945.05 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 2/20/2019 | ND | 5.73 | NA | 6946.95 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 5/13/2019 | ND | 6.81 | NA | 6945.87 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 8/20/2019 | ND | 7.33 | NA | 6945.35 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 10/30/2019 | ND | 8.43 | NA | 6944.25 | 6952.68 | 6952.57 | -0.11 | 8.92 | 1.0 | 9.8 |
| MKTF-21 | 2/5/2020 | ND | 8.36 | NA | 6944.32 | 6952.68 | 6952.57 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-21 | 6/26/2020 | 8.28 | 8.31 | 0.03 | 6944.37 | 6952.68 | 6952.57 | -0.11 | 8.94 | 1.0 | 9.8 |
| MKTF-21 | 9/15/2020 | 7.19 | 7.20 | 0.01 | 6945.48 | 6952.68 | 6952.57 | -0.11 | 8.95 | 1.0 | 9.8 |
| MKTF-21 | 11/10/2020 | ND | 6.52 | NA | 6946.16 | 6952.68 | 6952.57 | -0.11 | 8.95 | 1.0 | 9.8 |
| MKTF-21 | 12/4/2020 | 8.15 | 8.16 | 0.01 | 6944.52 | 6952.68 | 6952.57 | -0.11 | 8.91 | 1.0 | 9.8 |
| MKTF-21 | 1/28/2021 | ND | 7.45 | NA | 6945.23 | 6952.68 | 6952.57 | -0.11 | 8.91 | 1.0 | 9.8 |
| MKTF-21 | 2/28/2021 | ND | 7.92 | NA | 6944.76 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 3/31/2021 | ND | 7.84 | NA | 6944.84 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 4/26/2021 | ND | 7.39 | NA | 6945.29 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 5/20/2021 | ND | 7.51 | NA | 6945.17 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 6/1/2021 | ND | 7.09 | NA | 6945.59 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 9/8/2021 | ND | 8.91 | NA | 6943.77 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 12/3/2021 | ND | 8.96 | NA | 6943.72 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 1/10/2022 | ND | 8.93 | NA | 6943.75 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 2/28/2022 | ND | 8.96 | NA | 6943.72 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 3/2/2022 | ND | 8.98 | NA | 6943.70 | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |
| MKTF-21 | 4/27/2022 | ND | 8.37 | NA | 6944.31 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 5/5/2022 | ND | 8.95 | NA | 6943.73 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 6/1/2022 | ND | 8.96 | NA | 6943.72 | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |
| MKTF-21 | 7/6/2022 | ND | 8.43 | NA | 6944.25 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 8/8/2022 | ND | 8.74 | NA | 6943.94 | 6952.68 | 6952.57 | -0.11 | 8.98 | 1.0 | 9.8 |
| MKTF-21 | 9/5/2022 | ND | 9.01 | NA | 6943.67 | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |
| MKTF-21 | 10/3/2022 | ND | Dry | NA | Dry | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |
| MKTF-21 | 11/2/2022 | ND | Dry | NA | Dry | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |
| MKTF-21 | 12/6/2022 | ND | Dry | NA | Dry | 6952.68 | 6952.57 | -0.11 | 9.06 | 1.0 | 9.8 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-22 | 6/4/2014 | ND | 23.70 | NA | 6916.06 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 11/17/2014 | ND | 24.12 | NA | 6915.64 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 3/12/2015 | ND | 23.52 | NA | 6916.24 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 6/9/2015 | ND | 23.63 | NA | 6916.13 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 8/20/2015 | ND | 23.65 | NA | 6916.11 | 6939.76 | 6942.31 | 2.55 | 33.70 | 22.0 | 32.0 |
| MKTF-22 | 11/9/2015 | ND | 23.50 | NA | 6916.26 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 2/25/2016 | ND | 23.58 | NA | 6916.18 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 6/10/2016 | ND | 23.51 | NA | 6916.25 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 9/10/2016 | ND | 23.58 | NA | 6916.18 | 6939.76 | 6942.31 | 2.55 | 33.70 | 22.0 | 32.0 |
| MKTF-22 | 11/9/2016 | ND | 23.50 | NA | 6916.26 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 3/8/2017 | ND | 22.55 | NA | 6917.21 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 6/7/2017 | ND | 22.76 | NA | 6917.00 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 10/3/2017 | ND | 22.64 | NA | 6917.12 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 11/27/2017 | ND | 22.63 | NA | 6917.13 | 6939.76 | 6942.31 | 2.55 | 33.05 | 22.0 | 32.0 |
| MKTF-22 | 2/7/2018 | ND | 22.95 | NA | 6916.81 | 6939.76 | 6942.31 | 2.55 | 33.05 | 22.0 | 32.0 |
| MKTF-22 | 4/26/2018 | ND | 22.85 | NA | 6916.91 | 6939.76 | 6942.31 | 2.55 | 32.96 | 22.0 | 32.0 |
| MKTF-22 | 8/15/2018 | ND | 23.25 | NA | 6916.51 | 6939.76 | 6942.31 | 2.55 | 33.07 | 22.0 | 32.0 |
| MKTF-22 | 11/27/2018 | ND | 23.02 | NA | 6916.74 | 6939.76 | 6942.31 | 2.55 | 33.05 | 22.0 | 32.0 |
| MKTF-22 | 3/25/2019 | ND | 21.88 | NA | 6917.88 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 5/9/2019 | ND | 22.09 | NA | 6917.67 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 8/20/2019 | ND | 22.40 | NA | 6917.36 | 6939.76 | 6942.31 | 2.55 | 33.07 | 22.0 | 32.0 |
| MKTF-22 | 10/24/2019 | ND | 22.85 | NA | 6916.91 | 6939.76 | 6942.31 | 2.55 | 33.05 | 22.0 | 32.0 |
| MKTF-22 | 2/27/2020 | 21.93 | 22.98 | 1.05 | 6916.78 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 6/29/2020 | 22.02 | 25.16 | 3.14 | 6914.60 | 6939.76 | 6942.31 | 2.55 | 32.70 | 22.0 | 32.0 |
| MKTF-22 | 9/14/2020 | 22.43 | 25.13 | 2.70 | 6914.63 | 6939.76 | 6942.31 | 2.55 | 32.54 | 22.0 | 32.0 |
| MKTF-22 | 11/10/2020 | 22.39 | 24.74 | 2.35 | 6915.02 | 6939.76 | 6942.31 | 2.55 | 32.54 | 22.0 | 32.0 |
| MKTF-22 | 12/4/2020 | 22.55 | 25.00 | 2.45 | 6914.76 | 6939.76 | 6942.31 | 2.55 | 32.54 | 22.0 | 32.0 |
| MKTF-22 | 1/28/2021 | 22.73 | 25.42 | 2.69 | 6914.34 | 6939.76 | 6942.31 | 2.55 | 32.54 | 22.0 | 32.0 |
| MKTF-22 | 2/28/2021 | 22.62 | 25.30 | 2.68 | 6914.46 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 3/31/2021 | 23.22 | 24.70 | 1.48 | 6915.06 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 4/26/2021 | 23.46 | 23.68 | 0.22 | 6916.08 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 5/20/2021 | 22.60 | 24.43 | 1.83 | 6915.33 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 6/1/2021 | 23.55 | 25.65 | 2.10 | 6914.11 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 9/8/2021 | 22.93 | 25.11 | 2.18 | 6914.65 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 12/3/2021 | 22.90 | 24.97 | 2.07 | 6914.79 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 1/10/2022 | 22.69 | 24.82 | 2.13 | 6914.94 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 2/28/2022 | 22.77 | 23.95 | 1.18 | 6915.81 | 6939.76 | 6942.31 | 2.55 | 33.11 | 22.0 | 32.0 |
| MKTF-22 | 3/2/2022 | 22.86 | 24.94 | 2.08 | 6914.82 | 6939.76 | 6942.31 | 2.55 | 33.13 | 22.0 | 32.0 |
| MKTF-22 | 4/27/2022 | 23.41 | 23.66 | 0.25 | 6916.10 | 6939.76 | 6942.31 | 2.55 | 33.13 | 22.0 | 32.0 |
| MKTF-22 | 5/4/2022 | 23.31 | 24.28 | 0.97 | 6915.48 | 6939.76 | 6942.31 | 2.55 | 33.13 | 22.0 | 32.0 |
| MKTF-22 | 6/1/2022 | 23.10 | 25.38 | 2.28 | 6914.38 | 6939.76 | 6942.31 | 2.55 | 33.15 | 22.0 | 32.0 |
| MKTF-22 | 7/6/2022 | 22.92 | 24.87 | 1.95 | 6914.89 | 6939.76 | 6942.31 | 2.55 | 33.16 | 22.0 | 32.0 |
| MKTF-22 | 8/8/2022 | 22.88 | 24.49 | 1.61 | 6915.27 | 6939.76 | 6942.31 | 2.55 | 33.17 | 22.0 | 32.0 |
| MKTF-22 | 9/5/2022 | 22.96 | 25.24 | 2.28 | 6914.52 | 6939.76 | 6942.31 | 2.55 | 33.17 | 22.0 | 32.0 |
| MKTF-22 | 10/3/2022 | 22.81 | 25.25 | 2.44 | 6914.51 | 6939.76 | 6942.31 | 2.55 | 33.17 | 22.0 | 32.0 |
| MKTF-22 | 11/2/2022 | 22.80 | 25.20 | 2.40 | 6914.56 | 6939.76 | 6942.31 | 2.55 | 33.17 | 22.0 | 32.0 |
| MKTF-22 | 12/6/2022 | 23.21 | 25.02 | 1.81 | 6914.74 | 6939.76 | 6942.31 | 2.55 | 33.17 | 22.0 | 32.0 |
| MKTF-23 | 6/4/2014 | ND | 12.10 | NA | 6915.13 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-23 | 9/23/2014 | ND | 12.64 | NA | 6914.59 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 11/17/2014 | ND | 12.52 | NA | 6914.71 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 3/12/2015 | ND | 12.04 | NA | 6915.19 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 6/9/2015 | ND | 11.07 | NA | 6916.16 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 8/21/2015 | ND | 12.01 | NA | 6915.22 | 6927.23 | 6929.98 | 2.75 | 18.61 | 7.0 | 17.0 |
| MKTF-23 | 11/9/2015 | ND | 11.86 | NA | 6915.37 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 2/25/2016 | ND | 11.92 | NA | 6915.31 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 6/10/2016 | ND | 11.89 | NA | 6915.34 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 9/10/2016 | 12.29 | 12.40 | 0.11 | 6914.83 | 6927.23 | 6929.98 | 2.75 | 18.61 | 7.0 | 17.0 |
| MKTF-23 | 11/9/2016 | ND | 11.86 | NA | 6915.37 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 3/8/2017 | ND | 11.45 | NA | 6915.78 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 6/7/2017 | 11.45 | 12.15 | 0.70 | 6915.08 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 10/3/2017 | 11.44 | 11.50 | 0.06 | 6915.73 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 11/27/2017 | 11.18 | 11.19 | 0.01 | 6916.04 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 2/7/2018 | 11.36 | 11.45 | 0.09 | 6915.78 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 4/26/2018 | 11.32 | 11.34 | 0.02 | 6915.89 | 6927.23 | 6929.98 | 2.75 | 17.52 | 7.0 | 17.0 |
| MKTF-23 | 8/15/2018 | 12.73 | 12.83 | 0.10 | 6914.40 | 6927.23 | 6929.98 | 2.75 | 17.63 | 7.0 | 17.0 |
| MKTF-23 | 11/27/2018 | 11.45 | 11.49 | 0.04 | 6915.74 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 3/25/2019 | ND | 9.80 | NA | 6917.43 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 5/9/2019 | 10.20 | 10.27 | 0.07 | 6916.96 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 8/20/2019 | 10.72 | 10.75 | 0.03 | 6916.48 | 6927.23 | 6929.98 | 2.75 | 17.63 | 7.0 | 17.0 |
| MKTF-23 | 10/28/2019 | ND | 11.20 | NA | 6916.03 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 2/27/2020 | 10.67 | 10.67 | 0.00 | 6916.56 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 6/29/2020 | ND | 10.50 | NA | 6916.73 | 6927.23 | 6929.98 | 2.75 | 17.61 | 7.0 | 17.0 |
| MKTF-23 | 9/19/2020 | 12.67 | 12.69 | 0.02 | 6914.54 | 6927.23 | 6929.98 | 2.75 | 17.27 | 7.0 | 17.0 |
| MKTF-23 | 11/10/2020 | ND | 11.48 | NA | 6915.75 | 6927.23 | 6929.98 | 2.75 | 17.27 | 7.0 | 17.0 |
| MKTF-23 | 12/4/2020 | 11.40 | 11.41 | 0.01 | 6915.82 | 6927.23 | 6929.98 | 2.75 | 17.64 | 7.0 | 17.0 |
| MKTF-23 | 1/28/2021 | 11.47 | 11.48 | 0.01 | 6915.75 | 6927.23 | 6929.98 | 2.75 | 18.01 | 7.0 | 17.0 |
| MKTF-23 | 2/28/2021 | 11.63 | 11.64 | 0.01 | 6915.59 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 3/31/2021 | ND | 11.46 | NA | 6915.77 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 4/26/2021 | ND | 11.15 | NA | 6916.08 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 5/20/2021 | ND | 11.44 | NA | 6915.79 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 6/1/2021 | ND | 11.23 | NA | 6916.00 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 9/8/2021 | 11.69 | 11.72 | 0.03 | 6915.51 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 12/3/2021 | 11.54 | 11.59 | 0.05 | 6915.64 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 1/10/2022 | 11.69 | 11.79 | 0.10 | 6915.44 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 2/28/2022 | 11.65 | 11.77 | 0.12 | 6915.46 | 6927.23 | 6929.98 | 2.75 | 17.66 | 7.0 | 17.0 |
| MKTF-23 | 3/1/2022 | 11.52 | 11.57 | 0.05 | 6915.66 | 6927.23 | 6929.98 | 2.75 | 17.65 | 7.0 | 17.0 |
| MKTF-23 | 4/27/2022 | 11.56 | 11.60 | 0.04 | 6915.63 | 6927.23 | 6929.98 | 2.75 | 17.65 | 7.0 | 17.0 |
| MKTF-23 | 5/5/2022 | 11.54 | 11.58 | 0.04 | 6915.65 | 6927.23 | 6929.98 | 2.75 | 17.65 | 7.0 | 17.0 |
| MKTF-23 | 6/1/2022 | 11.55 | 11.63 | 0.08 | 6915.60 | 6927.23 | 6929.98 | 2.75 | 17.68 | 7.0 | 17.0 |
| MKTF-23 | 7/6/2022 | 12.23 | 12.27 | 0.04 | 6914.96 | 6927.23 | 6929.98 | 2.75 | 17.69 | 7.0 | 17.0 |
| MKTF-23 | 8/8/2022 | 12.35 | 12.40 | 0.05 | 6914.83 | 6927.23 | 6929.98 | 2.75 | 17.71 | 7.0 | 17.0 |
| MKTF-23 | 9/5/2022 | 11.40 | 11.46 | 0.06 | 6915.77 | 6927.23 | 6929.98 | 2.75 | 17.71 | 7.0 | 17.0 |
| MKTF-23 | 10/3/2022 | 11.44 | 11.51 | 0.07 | 6915.72 | 6927.23 | 6929.98 | 2.75 | 17.71 | 7.0 | 17.0 |
| MKTF-23 | 11/2/2022 | 11.45 | 11.53 | 0.08 | 6915.70 | 6927.23 | 6929.98 | 2.75 | 17.71 | 7.0 | 17.0 |
| MKTF-23 | 12/6/2022 | 11.56 | 11.65 | 0.09 | 6915.58 | 6927.23 | 6929.98 | 2.75 | 17.71 | 7.0 | 17.0 |
| MKTF-24 | 6/4/2014 | ND | 18.85 | NA | 6907.22 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-24 | 9/23/2014 | ND | 19.92 | NA | 6906.15 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 11/14/2014 | ND | 19.56 | NA | 6906.51 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 3/11/2015 | ND | 18.89 | NA | 6907.18 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 6/10/2015 | ND | 19.00 | NA | 6907.07 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 8/20/2015 | ND | 18.88 | NA | 6907.19 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 11/4/2015 | ND | 19.07 | NA | 6907.00 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 2/22/2016 | ND | 18.69 | NA | 6907.38 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 6/8/2016 | ND | 18.58 | NA | 6907.49 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 9/7/2016 | ND | 20.04 | NA | 6906.03 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 11/4/2016 | ND | 19.07 | NA | 6907.00 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 3/6/2017 | ND | 17.96 | NA | 6908.11 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 6/5/2017 | ND | 18.42 | NA | 6907.65 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 10/3/2017 | ND | 18.87 | NA | 6907.20 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 11/20/2017 | ND | 18.88 | NA | 6907.19 | 6926.07 | 6928.72 | 2.65 | 28.17 | 18.0 | 28.0 |
| MKTF-24 | 2/6/2018 | ND | 18.95 | NA | 6907.12 | 6926.07 | 6928.72 | 2.65 | 28.18 | 18.0 | 28.0 |
| MKTF-24 | 4/25/2018 | ND | 19.11 | NA | 6906.96 | 6926.07 | 6928.72 | 2.65 | 28.13 | 18.0 | 28.0 |
| MKTF-24 | 8/15/2018 | ND | 20.00 | NA | 6906.07 | 6926.07 | 6928.72 | 2.65 | 28.20 | 18.0 | 28.0 |
| MKTF-24 | 11/14/2018 | ND | 20.65 | NA | 6905.42 | 6926.07 | 6928.72 | 2.65 | 28.17 | 18.0 | 28.0 |
| MKTF-24 | 2/25/2019 | ND | 19.78 | NA | 6906.29 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 5/6/2019 | ND | 18.88 | NA | 6907.19 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 8/23/2019 | ND | 19.40 | NA | 6906.67 | 6926.07 | 6928.72 | 2.65 | 28.20 | 18.0 | 28.0 |
| MKTF-24 | 10/22/2019 | ND | 20.56 | NA | 6905.51 | 6926.07 | 6928.72 | 2.65 | 28.17 | 18.0 | 28.0 |
| MKTF-24 | 2/24/2020 | ND | 19.52 | NA | 6906.55 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 6/26/2020 | ND | 20.15 | NA | 6905.92 | 6926.07 | 6928.72 | 2.65 | 27.82 | 18.0 | 28.0 |
| MKTF-24 | 9/15/2020 | ND | 20.70 | NA | 6905.37 | 6926.07 | 6928.72 | 2.65 | 28.48 | 18.0 | 28.0 |
| MKTF-24 | 11/10/2020 | ND | 20.67 | NA | 6905.40 | 6926.07 | 6928.72 | 2.65 | 28.48 | 18.0 | 28.0 |
| MKTF-24 | 12/4/2020 | ND | 20.57 | NA | 6905.50 | 6926.07 | 6928.72 | 2.65 | 28.53 | 18.0 | 28.0 |
| MKTF-24 | 1/28/2021 | ND | 20.61 | NA | 6905.46 | 6926.07 | 6928.72 | 2.65 | 28.58 | 18.0 | 28.0 |
| MKTF-24 | 2/27/2021 | ND | 20.32 | NA | 6905.75 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 3/31/2021 | ND | 20.51 | NA | 6905.56 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 4/26/2021 | ND | 21.51 | NA | 6904.56 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 5/20/2021 | ND | 20.56 | NA | 6905.51 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 6/1/2021 | ND | 20.75 | NA | 6905.32 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 9/8/2021 | ND | 21.35 | NA | 6904.72 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 12/15/2021 | ND | 20.90 | NA | 6905.17 | 6926.07 | 6928.72 | 2.65 | 28.82 | 18.0 | 28.0 |
| MKTF-24 | 1/10/2022 | ND | 20.57 | NA | 6905.50 | 6926.07 | 6928.72 | 2.65 | 28.77 | 18.0 | 28.0 |
| MKTF-24 | 2/28/2022 | ND | 20.55 | NA | 6905.52 | 6926.07 | 6928.72 | 2.65 | 28.77 | 18.0 | 28.0 |
| MKTF-24 | 3/2/2022 | ND | 20.95 | NA | 6905.12 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 4/27/2022 | ND | 21.26 | NA | 6904.81 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 5/5/2022 | ND | 20.90 | NA | 6905.17 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 6/2/2022 | 20.76 | 20.78 | 0.02 | 6905.29 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 7/6/2022 | 20.37 | 20.46 | 0.09 | 6905.61 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 8/8/2022 | 19.63 | 19.71 | 0.08 | 6906.36 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 9/5/2022 | 20.88 | 20.90 | 0.02 | 6905.17 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 10/3/2022 | 20.93 | 20.97 | 0.04 | 6905.10 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 11/2/2022 | 20.95 | 20.98 | 0.03 | 6905.09 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-24 | 12/6/2022 | 21.12 | 21.17 | 0.05 | 6904.90 | 6926.07 | 6928.72 | 2.65 | 28.75 | 18.0 | 28.0 |
| MKTF-25 | 6/6/2014 | ND | 8.04 | NA | 6905.31 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-25 | 9/23/2014 | ND | 9.29 | NA | 6904.06 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 11/5/2014 | ND | 8.36 | NA | 6904.99 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 11/14/2014 | ND | 8.62 | NA | 6904.73 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 3/11/2015 | ND | 8.01 | NA | 6905.34 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 6/10/2015 | ND | 8.20 | NA | 6905.15 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 8/21/2015 | ND | 7.76 | NA | 6905.59 | 6913.35 | 6916.19 | 2.84 | 17.59 | 6.0 | 16.0 |
| MKTF-25 | 2/23/2016 | ND | 7.99 | NA | 6905.36 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 6/9/2016 | ND | 8.38 | NA | 6904.97 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 9/8/2016 | ND | 9.33 | NA | 6904.02 | 6913.35 | 6916.19 | 2.84 | 17.59 | 6.0 | 16.0 |
| MKTF-25 | 11/5/2016 | ND | 8.36 | NA | 6904.99 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 3/6/2017 | ND | 6.68 | NA | 6906.67 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 6/5/2017 | ND | 7.39 | NA | 6905.96 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 9/25/2017 | ND | 8.20 | NA | 6905.15 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 11/21/2017 | ND | 8.27 | NA | 6905.08 | 6913.35 | 6916.19 | 2.84 | 16.96 | 6.0 | 16.0 |
| MKTF-25 | 2/5/2018 | ND | 8.36 | NA | 6904.99 | 6913.35 | 6916.19 | 2.84 | 16.71 | 6.0 | 16.0 |
| MKTF-25 | 4/25/2018 | ND | 8.34 | NA | 6905.01 | 6913.35 | 6916.19 | 2.84 | 16.66 | 6.0 | 16.0 |
| MKTF-25 | 8/15/2018 | ND | 9.52 | NA | 6903.83 | 6913.35 | 6916.19 | 2.84 | 16.94 | 6.0 | 16.0 |
| MKTF-25 | 11/14/2018 | ND | 10.51 | NA | 6902.84 | 6913.35 | 6916.19 | 2.84 | 16.96 | 6.0 | 16.0 |
| MKTF-25 | 2/14/2019 | ND | 10.29 | NA | 6903.06 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 5/6/2019 | ND | 9.16 | NA | 6904.19 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 8/23/2019 | ND | 10.28 | NA | 6903.07 | 6913.35 | 6916.19 | 2.84 | 16.94 | 6.0 | 16.0 |
| MKTF-25 | 8/27/2019 | ND | 10.39 | NA | 6902.96 | 6913.35 | 6916.19 | 2.84 | 17.94 | 6.0 | 16.0 |
| MKTF-25 | 10/22/2019 | ND | 10.88 | NA | 6902.47 | 6913.35 | 6916.19 | 2.84 | 16.96 | 6.0 | 16.0 |
| MKTF-25 | 2/26/2020 | ND | 10.10 | NA | 6903.25 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 6/26/2020 | ND | 10.49 | NA | 6902.86 | 6913.35 | 6916.19 | 2.84 | 16.59 | 6.0 | 16.0 |
| MKTF-25 | 9/15/2020 | ND | 11.06 | NA | 6902.29 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 11/10/2020 | ND | 10.91 | NA | 6902.44 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 12/4/2020 | ND | 10.78 | NA | 6902.57 | 6913.35 | 6916.19 | 2.84 | 17.54 | 6.0 | 16.0 |
| MKTF-25 | 1/28/2021 | ND | 10.70 | NA | 6902.65 | 6913.35 | 6916.19 | 2.84 | 17.54 | 6.0 | 16.0 |
| MKTF-25 | 2/27/2021 | ND | 10.62 | NA | 6902.73 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 3/31/2021 | ND | 10.57 | NA | 6902.78 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 4/26/2021 | ND | 11.30 | NA | 6902.05 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 5/20/2021 | ND | 10.48 | NA | 6902.87 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 6/1/2021 | ND | 10.72 | NA | 6902.63 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 9/8/2021 | ND | 11.61 | NA | 6901.74 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 12/16/2021 | ND | 10.88 | NA | 6902.47 | 6913.35 | 6916.19 | 2.84 | 17.25 | 6.0 | 16.0 |
| MKTF-25 | 1/10/2022 | ND | 10.71 | NA | 6902.64 | 6913.35 | 6916.19 | 2.84 | 17.23 | 6.0 | 16.0 |
| MKTF-25 | 2/28/2022 | ND | 10.66 | NA | 6902.69 | 6913.35 | 6916.19 | 2.84 | 17.23 | 6.0 | 16.0 |
| MKTF-25 | 3/2/2022 | ND | 10.86 | NA | 6902.49 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 4/27/2022 | ND | 11.30 | NA | 6902.05 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 5/5/2022 | ND | 11.17 | NA | 6902.18 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 6/2/2022 | 10.79 | 10.81 | 0.02 | 6902.54 | 6913.35 | 6916.19 | 2.84 | 17.54 | 6.0 | 16.0 |
| MKTF-25 | 7/6/2022 | 10.62 | 10.66 | 0.04 | 6902.69 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 8/8/2022 | 10.76 | 10.79 | 0.03 | 6902.56 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 9/5/2022 | 10.73 | 10.75 | 0.02 | 6902.60 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 10/3/2022 | 10.79 | 10.82 | 0.03 | 6902.53 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 11/2/2022 | 10.79 | 10.82 | 0.03 | 6902.53 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |
| MKTF-25 | 12/6/2022 | 10.80 | 10.84 | 0.04 | 6902.51 | 6913.35 | 6916.19 | 2.84 | 17.24 | 6.0 | 16.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-26 | 6/4/2014 | ND | 5.87 | NA | 6906.68 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 9/23/2014 | ND | 6.54 | NA | 6906.01 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 11/14/2014 | ND | 5.96 | NA | 6906.59 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 3/11/2015 | ND | 5.24 | NA | 6907.31 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 6/10/2015 | ND | 5.81 | NA | 6906.74 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 8/20/2015 | ND | 5.78 | NA | 6906.77 | 6912.55 | 6915.31 | 2.76 | 15.39 | 4.0 | 14.0 |
| MKTF-26 | 11/4/2015 | ND | 5.64 | NA | 6906.91 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 2/22/2016 | ND | 5.41 | NA | 6907.14 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 6/9/2016 | ND | 6.84 | NA | 6905.71 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 9/7/2016 | 6.68 | 8.05 | 1.37 | 6904.50 | 6912.55 | 6915.31 | 2.76 | 15.39 | 4.0 | 14.0 |
| MKTF-26 | 11/4/2016 | ND | 5.64 | NA | 6906.91 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 3/6/2017 | 4.68 | 5.43 | 0.75 | 6907.12 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 6/5/2017 | 5.27 | 6.23 | 0.96 | 6906.32 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 10/3/2017 | 5.01 | 5.84 | 0.83 | 6906.71 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 11/20/2017 | 5.33 | 6.17 | 0.84 | 6906.38 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 2/7/2018 | 5.77 | 6.60 | 0.83 | 6905.95 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 4/25/2018 | 5.80 | 6.61 | 0.81 | 6905.94 | 6912.55 | 6915.31 | 2.76 | 14.29 | 4.0 | 14.0 |
| MKTF-26 | 8/15/2018 | 5.97 | 6.81 | 0.84 | 6905.74 | 6912.55 | 6915.31 | 2.76 | 14.41 | 4.0 | 14.0 |
| MKTF-26 | 11/14/2018 | 5.69 | 7.14 | 1.45 | 6905.41 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 2/14/2019 | 5.62 | 6.39 | 0.77 | 6906.16 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 5/6/2019 | 5.04 | 5.89 | 0.85 | 6906.66 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 8/23/2019 | 5.46 | 6.29 | 0.83 | 6906.26 | 6912.55 | 6915.31 | 2.76 | 14.41 | 4.0 | 14.0 |
| MKTF-26 | 10/22/2019 | 5.87 | 6.60 | 0.73 | 6905.95 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 2/26/2020 | 5.59 | 6.35 | 0.76 | 6906.20 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 6/26/2020 | 5.85 | 6.74 | 0.89 | 6905.81 | 6912.55 | 6915.31 | 2.76 | 14.39 | 4.0 | 14.0 |
| MKTF-26 | 9/15/2020 | 6.05 | 6.80 | 0.75 | 6905.75 | 6912.55 | 6915.31 | 2.76 | 14.09 | 4.0 | 14.0 |
| MKTF-26 | 11/10/2020 | 5.89 | 6.60 | 0.71 | 6905.95 | 6912.55 | 6915.31 | 2.76 | 14.09 | 4.0 | 14.0 |
| MKTF-26 | 12/4/2020 | 4.91 | 6.63 | 1.72 | 6905.92 | 6912.55 | 6915.31 | 2.76 | 14.40 | 4.0 | 14.0 |
| MKTF-26 | 1/28/2021 | 6.17 | 6.44 | 0.27 | 6906.11 | 6912.55 | 6915.31 | 2.76 | 14.40 | 4.0 | 14.0 |
| MKTF-26 | 2/27/2021 | 6.12 | 6.29 | 0.17 | 6906.26 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 3/31/2021 | 6.24 | 6.35 | 0.11 | 6906.20 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 4/26/2021 | 6.05 | 6.16 | 0.11 | 6906.39 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 5/20/2021 | 6.26 | 6.38 | 0.12 | 6906.17 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 6/1/2021 | 6.34 | 6.43 | 0.09 | 6906.12 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 9/9/2021 | 6.01 | 6.05 | 0.04 | 6906.50 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 12/9/2021 | 6.01 | 6.20 | 0.19 | 6906.35 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 1/10/2022 | ND | 6.06 | NA | 6906.49 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 2/28/2022 | ND | 6.05 | NA | 6906.50 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 3/2/2022 | 6.09 | 6.22 | 0.13 | 6906.33 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 4/27/2022 | 6.09 | 6.19 | 0.10 | 6906.36 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 5/5/2022 | 6.08 | 6.20 | 0.12 | 6906.35 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 6/1/2022 | 6.20 | 6.22 | 0.02 | 6906.33 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 7/6/2022 | 5.89 | 5.92 | 0.03 | 6906.63 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 8/8/2022 | 5.92 | 5.94 | 0.02 | 6906.61 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 9/5/2022 | 6.20 | 6.24 | 0.04 | 6906.31 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 10/3/2022 | 6.22 | 6.28 | 0.06 | 6906.27 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 11/2/2022 | 6.24 | 6.31 | 0.07 | 6906.24 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |
| MKTF-26 | 12/6/2022 | 6.27 | 6.34 | 0.07 | 6906.21 | 6912.55 | 6915.31 | 2.76 | 14.14 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-27 | 6/4/2014 | ND | 5.13 | NA | 6910.23 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 9/23/2014 | ND | 6.06 | NA | 6909.30 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 11/14/2014 | ND | 5.61 | NA | 6909.75 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 3/11/2015 | ND | 4.56 | NA | 6910.80 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 6/9/2015 | ND | 4.90 | NA | 6910.46 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 8/20/2015 | ND | 5.31 | NA | 6910.05 | 6915.36 | 6917.90 | 2.54 | 13.18 | 2.0 | 12.0 |
| MKTF-27 | 11/4/2015 | ND | 4.99 | NA | 6910.37 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 2/22/2016 | ND | 4.66 | NA | 6910.70 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 6/8/2016 | ND | 4.97 | NA | 6910.39 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 9/7/2016 | ND | 5.52 | NA | 6909.84 | 6915.36 | 6917.90 | 2.54 | 13.18 | 2.0 | 12.0 |
| MKTF-27 | 11/4/2016 | ND | 4.99 | NA | 6910.37 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 3/6/2017 | ND | 3.48 | NA | 6911.88 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 6/5/2017 | ND | 3.78 | NA | 6911.58 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 10/3/2017 | ND | 3.36 | NA | 6912.00 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 11/20/2017 | ND | 3.44 | NA | 6911.92 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 2/6/2018 | ND | 3.71 | NA | 6911.65 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 4/25/2018 | ND | 3.80 | NA | 6911.56 | 6915.36 | 6917.90 | 2.54 | 12.08 | 2.0 | 12.0 |
| MKTF-27 | 8/15/2018 | ND | 3.61 | NA | 6911.75 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 11/14/2018 | ND | 3.77 | NA | 6911.59 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 2/25/2019 | ND | 1.21 | NA | 6914.15 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 5/6/2019 | ND | 3.19 | NA | 6912.17 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 8/21/2019 | ND | 3.12 | NA | 6912.24 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 10/30/2019 | ND | 3.60 | NA | 6911.76 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 2/24/2020 | ND | 1.07 | NA | 6914.29 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 6/30/2020 | ND | 4.16 | NA | 6911.20 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 9/15/2020 | ND | 3.67 | NA | 6911.69 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 11/10/2020 | ND | 4.18 | NA | 6911.18 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 12/4/2020 | ND | 3.93 | NA | 6911.43 | 6915.36 | 6917.90 | 2.54 | 12.20 | 2.0 | 12.0 |
| MKTF-27 | 1/28/2021 | ND | 4.08 | NA | 6911.28 | 6915.36 | 6917.90 | 2.54 | 12.20 | 2.0 | 12.0 |
| MKTF-27 | 2/28/2021 | ND | 2.97 | NA | 6912.39 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 3/31/2021 | ND | 3.94 | NA | 6911.42 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 4/26/2021 | ND | 3.64 | NA | 6911.72 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 5/20/2021 | ND | 3.98 | NA | 6911.38 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 6/1/2021 | ND | 4.15 | NA | 6911.21 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 9/9/2021 | ND | 4.46 | NA | 6910.90 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 12/13/2021 | ND | 4.07 | NA | 6911.29 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 1/10/2022 | ND | 4.33 | NA | 6911.03 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 2/28/2022 | ND | 4.31 | NA | 6911.05 | 6915.36 | 6917.90 | 2.54 | 12.22 | 2.0 | 12.0 |
| MKTF-27 | 3/1/2022 | ND | 4.04 | NA | 6911.32 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 4/27/2022 | ND | 3.86 | NA | 6911.50 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 5/5/2022 | ND | 4.07 | NA | 6911.29 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 6/2/2022 | ND | 4.58 | NA | 6910.78 | 6915.36 | 6917.90 | 2.54 | 12.20 | 2.0 | 12.0 |
| MKTF-27 | 7/6/2022 | ND | 4.55 | NA | 6910.81 | 6915.36 | 6917.90 | 2.54 | 12.19 | 2.0 | 12.0 |
| MKTF-27 | 8/8/2022 | ND | 4.42 | NA | 6910.94 | 6915.36 | 6917.90 | 2.54 | 12.18 | 2.0 | 12.0 |
| MKTF-27 | 9/2/2022 | ND | 4.81 | NA | 6910.55 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 10/3/2022 | ND | 4.90 | NA | 6910.46 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 11/2/2022 | ND | 6.48 | NA | 6908.88 | 6915.36 | 6917.90 | 2.54 | 12.21 | 2.0 | 12.0 |
| MKTF-27 | 12/8/2022 | ND | 4.27 | NA | 6911.09 | 6915.36 | 6917.90 | 2.54 | 12.24 | 2.0 | 12.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-28 | 6/6/2014 | ND | 8.95 | NA | 6909.72 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 9/23/2014 | ND | 3.35 | NA | 6915.32 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 11/14/2014 | ND | 3.15 | NA | 6915.52 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 3/11/2015 | ND | 3.79 | NA | 6914.88 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 6/9/2015 | ND | 2.55 | NA | 6916.12 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 8/20/2015 | ND | 3.57 | NA | 6915.10 | 6918.67 | 6921.52 | 2.85 | 14.31 | 3.0 | 13.0 |
| MKTF-28 | 11/4/2015 | ND | 2.89 | NA | 6915.78 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 2/23/2016 | ND | 2.47 | NA | 6916.20 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 6/8/2016 | ND | 2.43 | NA | 6916.24 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 9/8/2016 | ND | 3.55 | NA | 6915.12 | 6918.67 | 6921.52 | 2.85 | 14.31 | 3.0 | 13.0 |
| MKTF-28 | 11/4/2016 | ND | 2.89 | NA | 6915.78 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 3/6/2017 | ND | 1.83 | NA | 6916.84 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 6/5/2017 | ND | 5.05 | NA | 6913.62 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 10/3/2017 | ND | 1.43 | NA | 6917.24 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 11/20/2017 | ND | 5.05 | NA | 6913.62 | 6918.67 | 6921.52 | 2.85 | 13.28 | 3.0 | 13.0 |
| MKTF-28 | 2/6/2018 | ND | 3.88 | NA | 6914.79 | 6918.67 | 6921.52 | 2.85 | 13.28 | 3.0 | 13.0 |
| MKTF-28 | 4/25/2018 | ND | 4.13 | NA | 6914.54 | 6918.67 | 6921.52 | 2.85 | 13.19 | 3.0 | 13.0 |
| MKTF-28 | 8/15/2018 | ND | 1.60 | NA | 6917.07 | 6918.67 | 6921.52 | 2.85 | 13.30 | 3.0 | 13.0 |
| MKTF-28 | 11/14/2018 | ND | 3.27 | NA | 6915.40 | 6918.67 | 6921.52 | 2.85 | 13.28 | 3.0 | 13.0 |
| MKTF-28 | 2/25/2019 | ND | 2.06 | NA | 6916.61 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 5/6/2019 | ND | 6.42 | NA | 6912.25 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 8/21/2019 | ND | 0.97 | NA | 6917.70 | 6918.67 | 6921.52 | 2.85 | 13.30 | 3.0 | 13.0 |
| MKTF-28 | 10/22/2019 | ND | 3.53 | NA | 6915.14 | 6918.67 | 6921.52 | 2.85 | 13.28 | 3.0 | 13.0 |
| MKTF-28 | 2/24/2020 | ND | 1.68 | NA | 6916.99 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 6/30/2020 | ND | 1.99 | NA | 6916.68 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 9/15/2020 | ND | 1.74 | NA | 6916.93 | 6918.67 | 6921.52 | 2.85 | 13.32 | 3.0 | 13.0 |
| MKTF-28 | 11/10/2020 | ND | 5.96 | NA | 6912.71 | 6918.67 | 6921.52 | 2.85 | 13.32 | 3.0 | 13.0 |
| MKTF-28 | 12/4/2020 | ND | 4.28 | NA | 6914.39 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 1/28/2021 | ND | 6.89 | NA | 6911.78 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 2/28/2021 | ND | 5.33 | NA | 6913.34 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 3/31/2021 | ND | 5.66 | NA | 6913.01 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 4/26/2021 | ND | 5.62 | NA | 6913.05 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 5/20/2021 | ND | 5.09 | NA | 6913.58 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 6/1/2021 | ND | 5.02 | NA | 6913.65 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 9/9/2021 | ND | 5.55 | NA | 6913.12 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 12/13/2021 | ND | 4.72 | NA | 6913.95 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 1/10/2022 | ND | 4.65 | NA | 6914.02 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 2/28/2022 | ND | 4.67 | NA | 6914.00 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 3/1/2022 | ND | 4.68 | NA | 6913.99 | 6918.67 | 6921.52 | 2.85 | 13.32 | 3.0 | 13.0 |
| MKTF-28 | 4/27/2022 | ND | 4.51 | NA | 6914.16 | 6918.67 | 6921.52 | 2.85 | 13.32 | 3.0 | 13.0 |
| MKTF-28 | 5/5/2022 | ND | 4.89 | NA | 6913.78 | 6918.67 | 6921.52 | 2.85 | 13.32 | 3.0 | 13.0 |
| MKTF-28 | 6/2/2022 | ND | 6.01 | NA | 6912.66 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 7/6/2022 | ND | 5.98 | NA | 6912.69 | 6918.67 | 6921.52 | 2.85 | 13.30 | 3.0 | 13.0 |
| MKTF-28 | 8/8/2022 | ND | 5.90 | NA | 6912.77 | 6918.67 | 6921.52 | 2.85 | 13.29 | 3.0 | 13.0 |
| MKTF-28 | 9/2/2022 | ND | 6.05 | NA | 6912.62 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 10/3/2022 | ND | 6.18 | NA | 6912.49 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 11/3/2022 | ND | 6.13 | NA | 6912.54 | 6918.67 | 6921.52 | 2.85 | 13.31 | 3.0 | 13.0 |
| MKTF-28 | 12/8/2022 | ND | 7.40 | NA | 6911.27 | 6918.67 | 6921.52 | 2.85 | 13.30 | 3.0 | 13.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-29 | 6/6/2014 | ND | -0.65 | NA | 6899.48 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 9/23/2014 | ND | 1.61 | NA | 6897.22 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 11/14/2014 | ND | 0.26 | NA | 6898.57 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 3/11/2015 | ND | -0.75 | NA | 6899.58 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 6/10/2015 | ND | -0.10 | NA | 6898.93 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 8/20/2015 | ND | -0.49 | NA | 6899.32 | 6898.83 | 6901.62 | 2.79 | 21.05 | 10.0 | 20.0 |
| MKTF-29 | 11/4/2015 | ND | -0.39 | NA | 6899.22 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 2/23/2016 | ND | -0.87 | NA | 6899.70 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 6/9/2016 | ND | -0.10 | NA | 6898.93 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 9/7/2016 | ND | 1.73 | NA | 6897.10 | 6898.83 | 6901.62 | 2.79 | 21.05 | 10.0 | 20.0 |
| MKTF-29 | 11/4/2016 | ND | -0.39 | NA | 6899.22 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 3/6/2017 | ND | -1.80 | NA | 6900.63 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 6/5/2017 | ND | -1.84 | NA | 6900.67 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 10/3/2017 | ND | -1.20 | NA | 6900.03 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 11/20/2017 | ND | -0.88 | NA | 6899.71 | 6898.83 | 6901.62 | 2.79 | 20.01 | 10.0 | 20.0 |
| MKTF-29 | 2/6/2018 | ND | -0.86 | NA | 6899.69 | 6898.83 | 6901.62 | 2.79 | 20.02 | 10.0 | 20.0 |
| MKTF-29 | 4/25/2018 | ND | -0.67 | NA | 6899.50 | 6898.83 | 6901.62 | 2.79 | 19.98 | 10.0 | 20.0 |
| MKTF-29 | 8/15/2018 | ND | 1.13 | NA | 6897.70 | 6898.83 | 6901.62 | 2.79 | 20.03 | 10.0 | 20.0 |
| MKTF-29 | 11/14/2018 | ND | 1.30 | NA | 6897.53 | 6898.83 | 6901.62 | 2.79 | 20.01 | 10.0 | 20.0 |
| MKTF-29 | 2/25/2019 | ND | 0.94 | NA | 6897.89 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 5/6/2019 | ND | 0.93 | NA | 6897.90 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 8/23/2019 | ND | 3.04 | NA | 6895.79 | 6898.83 | 6901.62 | 2.79 | 20.03 | 10.0 | 20.0 |
| MKTF-29 | 10/22/2019 | ND | 3.53 | NA | 6895.30 | 6898.83 | 6901.62 | 2.79 | 20.01 | 10.0 | 20.0 |
| MKTF-29 | 2/24/2020 | ND | 1.70 | NA | 6897.13 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 6/26/2020 | ND | 3.63 | NA | 6895.20 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 9/15/2020 | ND | 5.22 | NA | 6893.61 | 6898.83 | 6901.62 | 2.79 | 19.99 | 10.0 | 20.0 |
| MKTF-29 | 11/10/2020 | ND | 4.19 | NA | 6894.64 | 6898.83 | 6901.62 | 2.79 | 19.99 | 10.0 | 20.0 |
| MKTF-29 | 12/4/2020 | ND | 3.61 | NA | 6895.22 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 1/28/2021 | ND | 2.82 | NA | 6896.01 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 2/28/2021 | ND | 2.52 | NA | 6896.31 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 3/31/2021 | ND | 2.41 | NA | 6896.42 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 4/26/2021 | ND | 2.13 | NA | 6896.70 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 5/20/2021 | ND | 2.42 | NA | 6896.41 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 6/1/2021 | ND | 1.33 | NA | 6897.50 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 9/9/2021 | ND | 5.96 | NA | 6892.87 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 12/13/2021 | ND | 3.66 | NA | 6895.17 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 1/10/2022 | ND | 3.85 | NA | 6894.98 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 2/28/2022 | ND | 3.86 | NA | 6894.97 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |
| MKTF-29 | 3/1/2022 | ND | 3.63 | NA | 6895.20 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 4/27/2022 | ND | 3.76 | NA | 6895.07 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 5/5/2022 | ND | 4.08 | NA | 6894.75 | 6898.83 | 6901.62 | 2.79 | 20.05 | 10.0 | 20.0 |
| MKTF-29 | 6/2/2022 | ND | 4.28 | NA | 6894.55 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 7/6/2022 | ND | 4.39 | NA | 6894.44 | 6898.83 | 6901.62 | 2.79 | 20.07 | 10.0 | 20.0 |
| MKTF-29 | 8/8/2022 | ND | 4.59 | NA | 6894.24 | 6898.83 | 6901.62 | 2.79 | 20.08 | 10.0 | 20.0 |
| MKTF-29 | 9/2/2022 | ND | 6.01 | NA | 6892.82 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 10/3/2022 | ND | 6.04 | NA | 6892.79 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 11/3/2022 | ND | 6.22 | NA | 6892.61 | 6898.83 | 6901.62 | 2.79 | 20.06 | 10.0 | 20.0 |
| MKTF-29 | 12/9/2022 | ND | 3.46 | NA | 6895.37 | 6898.83 | 6901.62 | 2.79 | 20.04 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-30 | 6/4/2014 | ND | 12.01 | NA | 6886.09 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 9/23/2014 | ND | 13.19 | NA | 6884.91 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 11/17/2014 | ND | 13.17 | NA | 6884.93 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 3/11/2015 | ND | 12.04 | NA | 6886.06 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 6/10/2015 | ND | 11.87 | NA | 6886.23 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 8/20/2015 | ND | 12.59 | NA | 6885.51 | 6898.10 | 6900.80 | 2.70 | 21.50 | 10.0 | 20.0 |
| MKTF-30 | 11/4/2015 | ND | 12.04 | NA | 6886.06 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 2/23/2016 | ND | 11.70 | NA | 6886.40 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 6/9/2016 | ND | 11.31 | NA | 6886.79 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 9/7/2016 | ND | 12.78 | NA | 6885.32 | 6898.10 | 6900.80 | 2.70 | 21.50 | 10.0 | 20.0 |
| MKTF-30 | 11/4/2016 | ND | 12.04 | NA | 6886.06 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 3/6/2017 | ND | 11.43 | NA | 6886.67 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 6/5/2017 | ND | 11.17 | NA | 6886.93 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 10/3/2017 | ND | 12.33 | NA | 6885.77 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 11/20/2017 | ND | 12.21 | NA | 6885.89 | 6898.10 | 6900.80 | 2.70 | 20.49 | 10.0 | 20.0 |
| MKTF-30 | 2/6/2018 | ND | 11.50 | NA | 6886.60 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 4/25/2018 | ND | 11.09 | NA | 6887.01 | 6898.10 | 6900.80 | 2.70 | 20.40 | 10.0 | 20.0 |
| MKTF-30 | 8/15/2018 | ND | 11.95 | NA | 6886.15 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 11/14/2018 | ND | 12.45 | NA | 6885.65 | 6898.10 | 6900.80 | 2.70 | 20.49 | 10.0 | 20.0 |
| MKTF-30 | 3/28/2019 | ND | 10.98 | NA | 6887.12 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 5/6/2019 | ND | 11.11 | NA | 6886.99 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 8/23/2019 | ND | 12.18 | NA | 6885.92 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 10/22/2019 | ND | 13.12 | NA | 6884.98 | 6898.10 | 6900.80 | 2.70 | 20.49 | 10.0 | 20.0 |
| MKTF-30 | 2/26/2020 | ND | 12.61 | NA | 6885.49 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 6/26/2020 | ND | 13.49 | NA | 6884.61 | 6898.10 | 6900.80 | 2.70 | 20.50 | 10.0 | 20.0 |
| MKTF-30 | 9/15/2020 | ND | 13.96 | NA | 6884.14 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 11/10/2020 | ND | 14.17 | NA | 6883.93 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 12/4/2020 | ND | 14.06 | NA | 6884.04 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 1/28/2021 | ND | 14.09 | NA | 6884.01 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 2/28/2021 | ND | 13.63 | NA | 6884.47 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 3/31/2021 | ND | 13.70 | NA | 6884.40 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 4/26/2021 | ND | 13.50 | NA | 6884.60 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 5/20/2021 | ND | 13.69 | NA | 6884.41 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 6/1/2021 | ND | 13.62 | NA | 6884.48 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 9/9/2021 | ND | 14.68 | NA | 6883.42 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 12/13/2021 | ND | 14.51 | NA | 6883.59 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 1/10/2022 | ND | 14.43 | NA | 6883.67 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 2/28/2022 | ND | 14.47 | NA | 6883.63 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 3/1/2022 | ND | 14.47 | NA | 6883.63 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 4/27/2022 | ND | 15.40 | NA | 6882.70 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 5/5/2022 | ND | 15.30 | NA | 6882.80 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 6/2/2022 | ND | 14.93 | NA | 6883.17 | 6898.10 | 6900.80 | 2.70 | 20.57 | 10.0 | 20.0 |
| MKTF-30 | 7/6/2022 | ND | 14.27 | NA | 6883.83 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 8/8/2022 | ND | 14.40 | NA | 6883.70 | 6898.10 | 6900.80 | 2.70 | 20.25 | 10.0 | 20.0 |
| MKTF-30 | 9/2/2022 | ND | 14.15 | NA | 6883.95 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 10/3/2022 | ND | 14.12 | NA | 6883.98 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 11/3/2022 | ND | 14.10 | NA | 6884.00 | 6898.10 | 6900.80 | 2.70 | 20.52 | 10.0 | 20.0 |
| MKTF-30 | 12/29/2022 | ND | 13.72 | NA | 6884.38 | 6898.10 | 6900.80 | 2.70 | 20.53 | 10.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-31 | 6/4/2014 | ND | 5.09 | NA | 6899.17 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 9/23/2014 | ND | 5.74 | NA | 6898.52 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 11/17/2014 | ND | 5.79 | NA | 6898.47 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 3/11/2015 | ND | 5.37 | NA | 6898.89 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 6/10/2015 | ND | 5.14 | NA | 6899.12 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 8/21/2015 | ND | 5.48 | NA | 6898.78 | 6904.26 | 6906.87 | 2.61 | 21.20 | 6.0 | 21.0 |
| MKTF-31 | 11/4/2015 | ND | 5.53 | NA | 6898.73 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 2/23/2016 | ND | 5.34 | NA | 6898.92 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 6/9/2016 | ND | 5.14 | NA | 6899.12 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 9/8/2016 | ND | 5.87 | NA | 6898.39 | 6904.26 | 6906.87 | 2.61 | 21.20 | 6.0 | 21.0 |
| MKTF-31 | 11/4/2016 | ND | 5.53 | NA | 6898.73 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 3/7/2017 | ND | 5.23 | NA | 6899.03 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 6/5/2017 | ND | 4.97 | NA | 6899.29 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 9/25/2017 | ND | 5.68 | NA | 6898.58 | 6904.26 | 6906.87 | 2.61 | 21.20 | 6.0 | 21.0 |
| MKTF-31 | 11/21/2017 | ND | 5.54 | NA | 6898.72 | 6904.26 | 6906.87 | 2.61 | 16.69 | 6.0 | 21.0 |
| MKTF-31 | 2/5/2018 | ND | 5.29 | NA | 6898.97 | 6904.26 | 6906.87 | 2.61 | 16.70 | 6.0 | 21.0 |
| MKTF-31 | 4/25/2018 | ND | 5.12 | NA | 6899.14 | 6904.26 | 6906.87 | 2.61 | 16.65 | 6.0 | 21.0 |
| MKTF-31 | 8/15/2018 | ND | 5.64 | NA | 6898.62 | 6904.26 | 6906.87 | 2.61 | 16.74 | 6.0 | 21.0 |
| MKTF-31 | 11/14/2018 | ND | 5.83 | NA | 6898.43 | 6904.26 | 6906.87 | 2.61 | 16.69 | 6.0 | 21.0 |
| MKTF-31 | 2/14/2019 | ND | 5.64 | NA | 6898.62 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 5/6/2019 | ND | 5.11 | NA | 6899.15 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 8/23/2019 | ND | 5.69 | NA | 6898.57 | 6904.26 | 6906.87 | 2.61 | 16.74 | 6.0 | 21.0 |
| MKTF-31 | 10/22/2019 | ND | 6.03 | NA | 6898.23 | 6904.26 | 6906.87 | 2.61 | 16.69 | 6.0 | 21.0 |
| MKTF-31 | 2/24/2020 | ND | 5.49 | NA | 6898.77 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 6/26/2020 | ND | 5.64 | NA | 6898.62 | 6904.26 | 6906.87 | 2.61 | 20.20 | 6.0 | 21.0 |
| MKTF-31 | 9/15/2020 | ND | 6.14 | NA | 6898.12 | 6904.26 | 6906.87 | 2.61 | 16.73 | 6.0 | 21.0 |
| MKTF-31 | 11/10/2020 | ND | 6.18 | NA | 6898.08 | 6904.26 | 6906.87 | 2.61 | 16.73 | 6.0 | 21.0 |
| MKTF-31 | 12/4/2020 | ND | 6.12 | NA | 6898.14 | 6904.26 | 6906.87 | 2.61 | 16.76 | 6.0 | 21.0 |
| MKTF-31 | 1/28/2021 | ND | 6.01 | NA | 6898.25 | 6904.26 | 6906.87 | 2.61 | 10.76 | 6.0 | 21.0 |
| MKTF-31 | 2/27/2021 | ND | 5.92 | NA | 6898.34 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 3/31/2021 | ND | 6.00 | NA | 6898.26 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 4/26/2021 | ND | 5.79 | NA | 6898.47 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 5/20/2021 | ND | 5.90 | NA | 6898.36 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 6/1/2021 | ND | 5.82 | NA | 6898.44 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 9/9/2021 | ND | 6.79 | NA | 6897.47 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 12/15/2021 | ND | 6.73 | NA | 6897.53 | 6904.26 | 6906.87 | 2.61 | 16.75 | 6.0 | 21.0 |
| MKTF-31 | 1/10/2022 | ND | 6.69 | NA | 6897.57 | 6904.26 | 6906.87 | 2.61 | 16.72 | 6.0 | 21.0 |
| MKTF-31 | 2/28/2022 | ND | 6.39 | NA | 6897.87 | 6904.26 | 6906.87 | 2.61 | 16.72 | 6.0 | 21.0 |
| MKTF-31 | 3/2/2022 | ND | 6.69 | NA | 6897.57 | 6904.26 | 6906.87 | 2.61 | 16.74 | 6.0 | 21.0 |
| MKTF-31 | 4/27/2022 | ND | 7.03 | NA | 6897.23 | 6904.26 | 6906.87 | 2.61 | 16.74 | 6.0 | 21.0 |
| MKTF-31 | 5/5/2022 | ND | 6.70 | NA | 6897.56 | 6904.26 | 6906.87 | 2.61 | 16.74 | 6.0 | 21.0 |
| MKTF-31 | 6/2/2022 | ND | 6.61 | NA | 6897.65 | 6904.26 | 6906.87 | 2.61 | 16.77 | 6.0 | 21.0 |
| MKTF-31 | 7/6/2022 | ND | 6.90 | NA | 6897.36 | 6904.26 | 6906.87 | 2.61 | 16.80 | 6.0 | 21.0 |
| MKTF-31 | 8/8/2022 | ND | 6.77 | NA | 6897.49 | 6904.26 | 6906.87 | 2.61 | 16.83 | 6.0 | 21.0 |
| MKTF-31 | 9/1/2022 | ND | 6.99 | NA | 6897.27 | 6904.26 | 6906.87 | 2.61 | 16.77 | 6.0 | 21.0 |
| MKTF-31 | 10/3/2022 | ND | 6.94 | NA | 6897.32 | 6904.26 | 6906.87 | 2.61 | 16.77 | 6.0 | 21.0 |
| MKTF-31 | 11/3/2022 | ND | 7.02 | NA | 6897.24 | 6904.26 | 6906.87 | 2.61 | 16.77 | 6.0 | 21.0 |
| MKTF-31 | 12/8/2022 | ND | 7.04 | NA | 6897.22 | 6904.26 | 6906.87 | 2.61 | 16.77 | 6.0 | 21.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-32 | 6/4/2014 | ND | 13.85 | NA | 6894.59 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 9/23/2014 | ND | 14.01 | NA | 6894.43 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 11/17/2014 | ND | 13.81 | NA | 6894.63 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 3/12/2015 | ND | 12.82 | NA | 6895.62 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 6/9/2015 | ND | 12.82 | NA | 6895.62 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 8/21/2015 | ND | 12.48 | NA | 6895.96 | 6908.44 | 6911.11 | 2.67 | 26.08 | 9.5 | 24.5 |
| MKTF-32 | 11/5/2015 | ND | 12.17 | NA | 6896.27 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 2/24/2016 | ND | 11.86 | NA | 6896.58 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 6/9/2016 | ND | 11.64 | NA | 6896.80 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 9/9/2016 | ND | 11.73 | NA | 6896.71 | 6908.44 | 6911.11 | 2.67 | 26.08 | 9.5 | 24.5 |
| MKTF-32 | 11/5/2016 | ND | 12.17 | NA | 6896.27 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 3/7/2017 | ND | 11.03 | NA | 6897.41 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 6/6/2017 | ND | 11.12 | NA | 6897.32 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 9/25/2017 | ND | 11.44 | NA | 6897.00 | 6908.44 | 6911.11 | 2.67 | 26.08 | 9.5 | 24.5 |
| MKTF-32 | 11/27/2017 | ND | 10.90 | NA | 6897.54 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 2/7/2018 | ND | 11.03 | NA | 6897.41 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 4/25/2018 | ND | 10.81 | NA | 6897.63 | 6908.44 | 6911.11 | 2.67 | 24.99 | 9.5 | 24.5 |
| MKTF-32 | 8/15/2018 | ND | 11.33 | NA | 6897.11 | 6908.44 | 6911.11 | 2.67 | 25.10 | 9.5 | 24.5 |
| MKTF-32 | 11/14/2018 | ND | 11.43 | NA | 6897.01 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 2/13/2019 | ND | 10.82 | NA | 6897.62 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 5/7/2019 | ND | 10.58 | NA | 6897.86 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 8/20/2019 | ND | 11.36 | NA | 6897.08 | 6908.44 | 6911.11 | 2.67 | 25.10 | 9.5 | 24.5 |
| MKTF-32 | 10/23/2019 | ND | 11.34 | NA | 6897.10 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 2/26/2020 | ND | 11.11 | NA | 6897.33 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 6/29/2020 | ND | 11.58 | NA | 6896.86 | 6908.44 | 6911.11 | 2.67 | 25.08 | 9.5 | 24.5 |
| MKTF-32 | 9/14/2020 | ND | 11.91 | NA | 6896.53 | 6908.44 | 6911.11 | 2.67 | 24.79 | 9.5 | 24.5 |
| MKTF-32 | 11/10/2020 | ND | 11.64 | NA | 6896.80 | 6908.44 | 6911.11 | 2.67 | 24.79 | 9.5 | 24.5 |
| MKTF-32 | 12/4/2020 | ND | 11.58 | NA | 6896.86 | 6908.44 | 6911.11 | 2.67 | 25.15 | 9.5 | 24.5 |
| MKTF-32 | 1/28/2021 | 11.41 | 11.41 | 0.00 | 6897.03 | 6908.44 | 6911.11 | 2.67 | 25.15 | 9.5 | 24.5 |
| MKTF-32 | 2/27/2021 | 11.34 | 11.35 | 0.01 | 6897.09 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 3/31/2021 | ND | 11.44 | NA | 6897.00 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 4/26/2021 | ND | 11.23 | NA | 6897.21 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 5/20/2021 | ND | 11.48 | NA | 6896.96 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 6/1/2021 | ND | 11.19 | NA | 6897.25 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 9/9/2021 | ND | 12.53 | NA | 6895.91 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 11/30/2021 | ND | 11.81 | NA | 6896.63 | 6908.44 | 6911.11 | 2.67 | 25.12 | 9.5 | 24.5 |
| MKTF-32 | 1/10/2022 | ND | 11.58 | NA | 6896.86 | 6908.44 | 6911.11 | 2.67 | 24.83 | 9.5 | 24.5 |
| MKTF-32 | 2/28/2022 | ND | 11.59 | NA | 6896.85 | 6908.44 | 6911.11 | 2.67 | 24.83 | 9.5 | 24.5 |
| MKTF-32 | 3/1/2022 | ND | 11.75 | NA | 6896.69 | 6908.44 | 6911.11 | 2.67 | 25.11 | 9.5 | 24.5 |
| MKTF-32 | 4/27/2022 | ND | 11.53 | NA | 6896.91 | 6908.44 | 6911.11 | 2.67 | 25.11 | 9.5 | 24.5 |
| MKTF-32 | 5/5/2022 | ND | 11.60 | NA | 6896.84 | 6908.44 | 6911.11 | 2.67 | 25.11 | 9.5 | 24.5 |
| MKTF-32 | 6/1/2022 | ND | 12.08 | NA | 6896.36 | 6908.44 | 6911.11 | 2.67 | 25.13 | 9.5 | 24.5 |
| MKTF-32 | 7/6/2022 | ND | 12.16 | NA | 6896.28 | 6908.44 | 6911.11 | 2.67 | 25.15 | 9.5 | 24.5 |
| MKTF-32 | 8/8/2022 | ND | 12.53 | NA | 6895.91 | 6908.44 | 6911.11 | 2.67 | 25.17 | 9.5 | 24.5 |
| MKTF-32 | 9/7/2022 | ND | 11.83 | NA | 6896.61 | 6908.44 | 6911.11 | 2.67 | 25.13 | 9.5 | 24.5 |
| MKTF-32 | 10/3/2022 | ND | 12.13 | NA | 6896.31 | 6908.44 | 6911.11 | 2.67 | 25.13 | 9.5 | 24.5 |
| MKTF-32 | 11/3/2022 | ND | 12.08 | NA | 6896.36 | 6908.44 | 6911.11 | 2.67 | 25.13 | 9.5 | 24.5 |
| MKTF-32 | 12/6/2022 | ND | 7.14 | NA | 6901.30 | 6908.44 | 6911.11 | 2.67 | 16.73 | 9.5 | 24.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-33 | 6/6/2014 | ND | 20.24 | NA | 6916.35 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 9/23/2014 | ND | 20.53 | NA | 6916.06 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 11/17/2014 | ND | 20.63 | NA | 6915.96 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 3/12/2015 | ND | 20.16 | NA | 6916.43 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 6/9/2015 | ND | 20.14 | NA | 6916.45 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 8/21/2015 | ND | 20.16 | NA | 6916.43 | 6936.59 | 6939.75 | 3.16 | 31.04 | 20.0 | 30.0 |
| MKTF-33 | 11/9/2015 | ND | 20.03 | NA | 6916.56 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 2/25/2016 | ND | 20.04 | NA | 6916.55 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 6/10/2016 | ND | 20.13 | NA | 6916.46 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 9/10/2016 | ND | 20.04 | NA | 6916.55 | 6936.59 | 6939.75 | 3.16 | 31.04 | 20.0 | 30.0 |
| MKTF-33 | 11/9/2016 | ND | 20.03 | NA | 6916.56 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 3/8/2017 | ND | 19.00 | NA | 6917.59 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 6/7/2017 | ND | 18.91 | NA | 6917.68 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 9/25/2017 | ND | 19.34 | NA | 6917.25 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 11/27/2017 | ND | 19.11 | NA | 6917.48 | 6936.59 | 6939.75 | 3.16 | 30.06 | 20.0 | 30.0 |
| MKTF-33 | 2/7/2018 | ND | 19.49 | NA | 6917.10 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 4/26/2018 | ND | 19.39 | NA | 6917.20 | 6936.59 | 6939.75 | 3.16 | 29.95 | 20.0 | 30.0 |
| MKTF-33 | 8/15/2018 | ND | 19.69 | NA | 6916.90 | 6936.59 | 6939.75 | 3.16 | 30.07 | 20.0 | 30.0 |
| MKTF-33 | 11/27/2018 | ND | 19.56 | NA | 6917.03 | 6936.59 | 6939.75 | 3.16 | 30.06 | 20.0 | 30.0 |
| MKTF-33 | 3/25/2019 | ND | 18.84 | NA | 6917.75 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 5/9/2019 | ND | 18.88 | NA | 6917.71 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 8/20/2019 | ND | 19.19 | NA | 6917.40 | 6936.59 | 6939.75 | 3.16 | 30.07 | 20.0 | 30.0 |
| MKTF-33 | 10/24/2019 | ND | 19.34 | NA | 6917.25 | 6936.59 | 6939.75 | 3.16 | 30.06 | 20.0 | 30.0 |
| MKTF-33 | 2/27/2020 | ND | 19.55 | NA | 6917.04 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 6/29/2020 | ND | 18.01 | NA | 6918.58 | 6936.59 | 6939.75 | 3.16 | 30.04 | 20.0 | 30.0 |
| MKTF-33 | 9/14/2020 | 18.45 | 24.86 | 6.41 | 6911.73 | 6936.59 | 6939.75 | 3.16 | 29.99 | 20.0 | 30.0 |
| MKTF-33 | 11/10/2020 | 18.49 | 24.65 | 6.16 | 6911.94 | 6936.59 | 6939.75 | 3.16 | 29.99 | 20.0 | 30.0 |
| MKTF-33 | 12/4/2020 | 18.53 | 24.61 | 6.08 | 6911.98 | 6936.59 | 6939.75 | 3.16 | 30.41 | 20.0 | 30.0 |
| MKTF-33 | 1/28/2021 | 19.42 | 22.80 | 3.38 | 6913.79 | 6936.59 | 6939.75 | 3.16 | 30.41 | 20.0 | 30.0 |
| MKTF-33 | 2/27/2021 | 19.84 | 20.59 | 0.75 | 6916.00 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 3/31/2021 | 20.03 | 20.25 | 0.22 | 6916.34 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 4/26/2021 | 21.00 | 21.61 | 0.61 | 6914.98 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 5/20/2021 | 20.05 | 20.36 | 0.31 | 6916.23 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 6/1/2021 | 19.91 | 20.29 | 0.38 | 6916.30 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 9/9/2021 | 20.30 | 20.49 | 0.19 | 6916.10 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 12/3/2021 | 20.13 | 20.17 | 0.04 | 6916.42 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 1/10/2022 | 20.04 | 20.19 | 0.15 | 6916.40 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 2/28/2022 | 19.76 | 19.78 | 0.02 | 6916.81 | 6936.59 | 6939.75 | 3.16 | 30.12 | 20.0 | 30.0 |
| MKTF-33 | 3/1/2022 | 20.09 | 20.13 | 0.04 | 6916.46 | 6936.59 | 6939.75 | 3.16 | 29.94 | 20.0 | 30.0 |
| MKTF-33 | 4/27/2022 | 19.99 | 20.03 | 0.04 | 6916.56 | 6936.59 | 6939.75 | 3.16 | 29.94 | 20.0 | 30.0 |
| MKTF-33 | 5/4/2022 | 20.07 | 20.09 | 0.02 | 6916.50 | 6936.59 | 6939.75 | 3.16 | 29.94 | 20.0 | 30.0 |
| MKTF-33 | 6/2/2022 | 20.24 | 20.30 | 0.06 | 6916.29 | 6936.59 | 6939.75 | 3.16 | 29.96 | 20.0 | 30.0 |
| MKTF-33 | 7/6/2022 | 20.06 | 20.09 | 0.03 | 6916.50 | 6936.59 | 6939.75 | 3.16 | 29.98 | 20.0 | 30.0 |
| MKTF-33 | 8/8/2022 | 20.02 | 20.06 | 0.04 | 6916.53 | 6936.59 | 6939.75 | 3.16 | 30.00 | 20.0 | 30.0 |
| MKTF-33 | 9/5/2022 | 20.18 | 20.22 | 0.04 | 6916.37 | 6936.59 | 6939.75 | 3.16 | 30.00 | 20.0 | 30.0 |
| MKTF-33 | 10/3/2022 | 20.29 | 20.34 | 0.05 | 6916.25 | 6936.59 | 6939.75 | 3.16 | 30.00 | 20.0 | 30.0 |
| MKTF-33 | 11/3/2022 | 20.30 | 20.37 | 0.07 | 6916.22 | 6936.59 | 6939.75 | 3.16 | 30.00 | 20.0 | 30.0 |
| MKTF-33 | 12/6/2022 | 20.32 | 20.39 | 0.07 | 6916.20 | 6936.59 | 6939.75 | 3.16 | 30.00 | 20.0 | 30.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-34 | 6/6/2014 | ND | 15.66 | NA | 6926.76 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 9/23/2014 | ND | 16.15 | NA | 6926.27 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 11/17/2014 | ND | 16.65 | NA | 6925.77 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 3/12/2015 | ND | 15.84 | NA | 6926.58 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 6/8/2015 | ND | 15.97 | NA | 6926.45 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 8/18/2015 | ND | 15.81 | NA | 6926.61 | 6942.42 | 6945.35 | 2.93 | 25.75 | 9.5 | 24.5 |
| MKTF-34 | 11/3/2015 | ND | 16.07 | NA | 6926.35 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 2/25/2016 | ND | 16.27 | NA | 6926.15 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 6/10/2016 | ND | 15.67 | NA | 6926.75 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 9/12/2016 | ND | 15.10 | NA | 6927.32 | 6942.42 | 6945.35 | 2.93 | 25.75 | 9.5 | 24.5 |
| MKTF-34 | 11/3/2016 | ND | 16.07 | NA | 6926.35 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 3/1/2017 | ND | 13.57 | NA | 6928.85 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 6/14/2017 | ND | 14.70 | NA | 6927.72 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 9/26/2017 | ND | 14.69 | NA | 6927.73 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 11/30/2017 | ND | 15.10 | NA | 6927.32 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 2/15/2018 | ND | 15.87 | NA | 6926.55 | 6942.42 | 6945.35 | 2.93 | 24.78 | 9.5 | 24.5 |
| MKTF-34 | 4/26/2018 | ND | 15.70 | NA | 6926.72 | 6942.42 | 6945.35 | 2.93 | 24.67 | 9.5 | 24.5 |
| MKTF-34 | 8/15/2018 | ND | 15.65 | NA | 6926.77 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 11/27/2018 | ND | 16.02 | NA | 6926.40 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 3/25/2019 | ND | 14.02 | NA | 6928.40 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 5/9/2019 | ND | 15.16 | NA | 6927.26 | 6942.42 | 6945.35 | 2.93 | 24.75 | 9.5 | 24.5 |
| MKTF-34 | 8/19/2019 | ND | 14.77 | NA | 6927.65 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 10/29/2019 | ND | 15.10 | NA | 6927.32 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 11/12/2019 | ND | 15.13 | NA | 6927.29 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 2/5/2020 | ND | 14.85 | NA | 6927.57 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 6/29/2020 | 16.11 | 16.13 | 0.02 | 6926.29 | 6942.42 | 6945.35 | 2.93 | 24.77 | 9.5 | 24.5 |
| MKTF-34 | 9/14/2020 | ND | 16.16 | NA | 6926.26 | 6942.42 | 6945.35 | 2.93 | 24.83 | 9.5 | 24.5 |
| MKTF-34 | 11/10/2020 | ND | 16.15 | NA | 6926.27 | 6942.42 | 6945.35 | 2.93 | 24.83 | 9.5 | 24.5 |
| MKTF-34 | 12/4/2020 | 15.98 | 15.99 | 0.01 | 6926.43 | 6942.42 | 6945.35 | 2.93 | 24.85 | 9.5 | 24.5 |
| MKTF-34 | 1/28/2021 | ND | 16.46 | NA | 6925.96 | 6942.42 | 6945.35 | 2.93 | 24.87 | 9.5 | 24.5 |
| MKTF-34 | 2/28/2021 | 15.47 | 15.48 | 0.01 | 6926.94 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 3/31/2021 | ND | 17.68 | NA | 6924.74 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 4/26/2021 | ND | 19.68 | NA | 6922.74 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 5/20/2021 | ND | 17.67 | NA | 6924.75 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 6/1/2021 | ND | 17.30 | NA | 6925.12 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 9/9/2021 | ND | 16.97 | NA | 6925.45 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 11/30/2021 | ND | 16.67 | NA | 6925.75 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 1/10/2022 | ND | 16.69 | NA | 6925.73 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 2/28/2022 | ND | 16.68 | NA | 6925.74 | 6942.42 | 6945.35 | 2.93 | 24.86 | 9.5 | 24.5 |
| MKTF-34 | 3/1/2022 | ND | 15.76 | NA | 6926.66 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 4/27/2022 | ND | 15.98 | NA | 6926.44 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 5/5/2022 | ND | 16.00 | NA | 6926.42 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 6/1/2022 | 15.77 | 15.79 | 0.02 | 6926.63 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 7/6/2022 | 14.70 | 15.39 | 0.69 | 6927.03 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 8/8/2022 | 14.91 | 15.73 | 0.82 | 6926.69 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 9/5/2022 | 15.73 | 15.76 | 0.03 | 6926.66 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 10/3/2022 | 15.72 | 15.76 | 0.04 | 6926.66 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-34 | 11/3/2022 | 15.71 | 15.77 | 0.06 | 6926.65 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-34 | 12/6/2022 | 15.82 | 15.89 | 0.07 | 6926.53 | 6942.42 | 6945.35 | 2.93 | 24.79 | 9.5 | 24.5 |
| MKTF-35 | 11/20/2014 | ND | 9.90 | NA | 6942.00 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 3/17/2015 | ND | 9.18 | NA | 6942.72 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 6/4/2015 | ND | 9.18 | NA | 6942.72 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 8/18/2015 | ND | 9.16 | NA | 6942.74 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 11/3/2015 | ND | 9.27 | NA | 6942.63 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 2/26/2016 | ND | 8.65 | NA | 6943.25 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 6/10/2016 | ND | 7.62 | NA | 6944.28 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 9/12/2016 | ND | 6.90 | NA | 6945.00 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 11/3/2016 | ND | 9.27 | NA | 6942.63 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 3/1/2017 | ND | 6.43 | NA | 6945.47 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 6/14/2017 | ND | 7.37 | NA | 6944.53 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 9/27/2017 | ND | 7.95 | NA | 6943.95 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 11/30/2017 | ND | 8.40 | NA | 6943.50 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 2/15/2018 | ND | 8.95 | NA | 6942.95 | 6951.90 | 6951.65 | -0.25 | 16.72 | 6.0 | 16.0 |
| MKTF-35 | 4/26/2018 | ND | 8.78 | NA | 6943.12 | 6951.90 | 6951.65 | -0.25 | 16.65 | 6.0 | 16.0 |
| MKTF-35 | 8/16/2018 | ND | 8.95 | NA | 6942.95 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 11/27/2018 | ND | 9.35 | NA | 6942.55 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 3/25/2019 | ND | 8.79 | NA | 6943.11 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 5/16/2019 | ND | 8.74 | NA | 6943.16 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 8/19/2019 | ND | 8.34 | NA | 6943.56 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 10/28/2019 | ND | 8.67 | NA | 6943.23 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 10/29/2019 | ND | 8.65 | NA | 6943.25 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 11/12/2019 | ND | 8.85 | NA | 6943.05 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 2/5/2020 | ND | 9.53 | NA | 6942.37 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 6/30/2020 | ND | 9.50 | NA | 6942.40 | 6951.90 | 6951.65 | -0.25 | 16.70 | 6.0 | 16.0 |
| MKTF-35 | 9/14/2020 | ND | 8.84 | NA | 6943.06 | 6951.90 | 6951.65 | -0.25 | 16.48 | 6.0 | 16.0 |
| MKTF-35 | 11/10/2020 | ND | 9.11 | NA | 6942.79 | 6951.90 | 6951.65 | -0.25 | 16.48 | 6.0 | 16.0 |
| MKTF-35 | 12/4/2020 | 9.27 | 9.28 | 0.01 | 6942.62 | 6951.90 | 6951.65 | -0.25 | 16.64 | 6.0 | 16.0 |
| MKTF-35 | 1/28/2021 | ND | 9.71 | NA | 6942.19 | 6951.90 | 6951.65 | -0.25 | 16.64 | 6.0 | 16.0 |
| MKTF-35 | 2/28/2021 | ND | 9.42 | NA | 6942.48 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 3/31/2021 | ND | 9.75 | NA | 6942.15 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 4/26/2021 | ND | 10.58 | NA | 6941.32 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 5/20/2021 | ND | 9.85 | NA | 6942.05 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 6/1/2021 | ND | 9.72 | NA | 6942.18 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 9/9/2021 | ND | 10.06 | NA | 6941.84 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 12/2/2021 | ND | 10.40 | NA | 6941.50 | 6951.90 | 6951.65 | -0.25 | 16.80 | 6.0 | 16.0 |
| MKTF-35 | 1/10/2022 | ND | 10.23 | NA | 6941.67 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 2/28/2022 | ND | 10.25 | NA | 6941.65 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 3/1/2022 | ND | 10.35 | NA | 6941.55 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 4/27/2022 | ND | 10.65 | NA | 6941.25 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 5/5/2022 | ND | 10.64 | NA | 6941.26 | 6951.90 | 6951.65 | -0.25 | 16.73 | 6.0 | 16.0 |
| MKTF-35 | 6/1/2022 | ND | 10.70 | NA | 6941.20 | 6951.90 | 6951.65 | -0.25 | 16.74 | 6.0 | 16.0 |
| MKTF-35 | 7/6/2022 | ND | 12.35 | NA | 6939.55 | 6951.90 | 6951.65 | -0.25 | 16.75 | 6.0 | 16.0 |
| MKTF-35 | 8/8/2022 | ND | 11.48 | NA | 6940.42 | 6951.90 | 6951.65 | -0.25 | 16.76 | 6.0 | 16.0 |
| MKTF-35 | 9/2/2022 | 10.16 | 10.21 | 0.05 | 6941.69 | 6951.90 | 6951.65 | -0.25 | 16.75 | 6.0 | 16.0 |
| MKTF-35 | 10/3/2022 | 10.27 | 10.32 | 0.05 | 6941.58 | 6951.90 | 6951.65 | -0.25 | 16.75 | 6.0 | 16.0 |
| MKTF-35 | 11/3/2022 | 10.25 | 10.28 | 0.03 | 6941.62 | 6951.90 | 6951.65 | -0.25 | 16.75 | 6.0 | 16.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-35 | 12/6/2022 | 10.26 | 10.30 | 0.04 | 6941.60 | 6951.90 | 6951.65 | -0.25 | 16.75 | 6.0 | 16.0 |
| MKTF-36 | 11/20/2014 | ND | 8.54 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 3/17/2015 | ND | 8.26 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 6/4/2015 | ND | 8.08 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 8/18/2015 | ND | 8.05 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/3/2015 | 7.55 | 8.21 | 0.66 | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 3/17/2016 | ND | 8.26 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 6/10/2016 | 7.33 | 7.35 | 0.02 | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 9/13/2016 | 7.09 | 7.10 | 0.01 | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/3/2016 | 7.55 | 8.21 | 0.66 | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 3/1/2017 | ND | 6.11 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 6/14/2017 | ND | 5.95 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 9/27/2017 | ND | 6.35 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/30/2017 | ND | 7.00 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 2/15/2018 | ND | 7.41 | NA | NA | 6950.67 | NA | -0.55 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 4/26/2018 | ND | 7.11 | NA | NA | 6950.67 | NA | -0.55 | 15.95 | 5.0 | 15.0 |
| MKTF-36 | 9/5/2018 | ND | 7.07 | NA | NA | 6950.67 | NA | -0.55 | 15.98 | 5.0 | 15.0 |
| MKTF-36 | 11/29/2018 | NA | NA | NA | NA | 6950.67 | NA | -0.55 | 15.98 | 5.0 | 15.0 |
| MKTF-36 | 3/25/2019 | NA | NA | NA | NA | 6950.67 | NA | -0.55 | 15.98 | 5.0 | 15.0 |
| MKTF-36 | 5/14/2019 | NA | NA | NA | NA | 6950.67 | NA | -0.55 | 15.98 | 5.0 | 15.0 |
| MKTF-36 | 8/19/2019 | NA | NA | NA | NA | 6950.67 | NA | -0.55 | 15.98 | 5.0 | 15.0 |
| MKTF-36 | 11/6/2019 | 5.63 | 10.88 | 5.25 | NA | 6950.67 | NA | -0.55 | 15.95 | 5.0 | 15.0 |
| MKTF-36 | 11/7/2019 | 4.69 | 10.60 | 5.91 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/12/2019 | 7.19 | 10.04 | 2.85 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/13/2019 | 7.34 | 9.79 | 2.45 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/14/2019 | 7.53 | 10.00 | 2.47 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/15/2019 | 7.70 | 9.85 | 2.15 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/19/2019 | 8.19 | 9.37 | 1.18 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 11/21/2019 | 8.39 | 9.17 | 0.78 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 12/2/2019 | 8.64 | 9.34 | 0.70 | NA | 6950.67 | NA | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 2/3/2020 | 8.28 | 8.83 | 0.55 | 6941.68 | 6950.67 | 6950.12 | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 6/30/2020 | 8.43 | 8.64 | 0.21 | 6941.87 | 6950.67 | 6950.12 | -0.39 | 16.00 | 5.0 | 15.0 |
| MKTF-36 | 9/14/2020 | ND | 8.26 | NA | 6942.25 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 11/10/2020 | 8.37 | 8.42 | 0.05 | 6942.09 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 12/4/2020 | 8.49 | 8.56 | 0.07 | 6941.95 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 1/28/2021 | 8.52 | 8.57 | 0.05 | 6941.94 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 2/28/2021 | 8.65 | 8.66 | 0.01 | 6941.85 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 3/31/2021 | ND | 8.75 | NA | 6941.76 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 4/26/2021 | ND | 9.30 | NA | 6941.21 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 5/20/2021 | ND | 8.69 | NA | 6941.82 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 6/1/2021 | ND | 8.50 | NA | 6942.01 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 9/8/2021 | 8.83 | 8.95 | 0.12 | 6941.56 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 12/9/2021 | 8.80 | 8.99 | 0.19 | 6941.52 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 1/10/2022 | 8.76 | 8.96 | 0.20 | 6941.55 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 2/28/2022 | 8.69 | 8.99 | 0.30 | 6941.52 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 3/2/2022 | 8.76 | 8.94 | 0.18 | 6941.57 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 4/27/2022 | 9.46 | 9.54 | 0.08 | 6940.97 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |
| MKTF-36 | 5/4/2022 | 9.39 | 9.49 | 0.10 | 6941.02 | 6950.67 | 6950.12 | -0.39 | 15.97 | 5.0 | 15.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-36 | 6/1/2022 | 8.74 | 8.92 | 0.18 | 6941.59 | 6950.67 | 6950.12 | -0.39 | 15.99 | 5.0 | 15.0 |
| MKTF-36 | 7/6/2022 | 8.91 | 8.98 | 0.07 | 6941.53 | 6950.67 | 6950.12 | -0.39 | 16.01 | 5.0 | 15.0 |
| MKTF-36 | 8/8/2022 | 8.86 | 8.93 | 0.07 | 6941.58 | 6950.67 | 6950.12 | -0.39 | 16.03 | 5.0 | 15.0 |
| MKTF-36 | 9/2/2022 | 8.66 | 8.73 | 0.07 | 6941.78 | 6950.67 | 6950.12 | -0.39 | 15.99 | 5.0 | 15.0 |
| MKTF-36 | 10/3/2022 | 8.70 | 8.77 | 0.07 | 6941.74 | 6950.67 | 6950.12 | -0.39 | 15.99 | 5.0 | 15.0 |
| MKTF-36 | 11/3/2022 | 8.72 | 8.79 | 0.07 | 6941.72 | 6950.67 | 6950.12 | -0.39 | 15.99 | 5.0 | 15.0 |
| MKTF-36 | 12/6/2022 | 8.79 | 8.87 | 0.08 | 6941.64 | 6950.67 | 6950.12 | -0.39 | 15.99 | 5.0 | 15.0 |
| MKTF-37 | 11/20/2014 | ND | 15.25 | NA | 6943.82 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 3/17/2015 | ND | 9.41 | NA | 6949.66 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 6/4/2015 | ND | 9.68 | NA | 6949.39 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 8/18/2015 | ND | 9.65 | NA | 6949.42 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 11/3/2015 | 9.74 | 9.77 | 0.03 | 6949.30 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 3/17/2016 | ND | 9.41 | NA | 6949.66 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 6/10/2016 | 8.41 | 8.43 | 0.02 | 6950.64 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 9/12/2016 | ND | 7.85 | NA | 6951.22 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 11/3/2016 | 9.74 | 9.77 | 0.03 | 6949.30 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 3/1/2017 | ND | 7.10 | NA | 6951.97 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 6/14/2017 | 7.40 | 7.44 | 0.04 | 6951.63 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 9/27/2017 | 8.03 | 8.09 | 0.06 | 6950.98 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 11/30/2017 | 8.59 | 8.61 | 0.02 | 6950.46 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 2/15/2018 | 9.16 | 9.20 | 0.04 | 6949.87 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 4/26/2018 | ND | 8.72 | NA | 6950.35 | 6959.07 | 6958.87 | -0.20 | 24.74 | 4.0 | 24.0 |
| MKTF-37 | 8/16/2018 | ND | 8.90 | NA | 6950.17 | 6959.07 | 6958.87 | -0.20 | 24.79 | 4.0 | 24.0 |
| MKTF-37 | 11/27/2018 | 9.60 | 9.72 | 0.12 | 6949.35 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 3/25/2019 | ND | 8.59 | NA | 6950.48 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 5/16/2019 | 9.30 | 9.38 | 0.08 | 6949.69 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 8/23/2019 | 9.05 | 9.07 | 0.02 | 6950.00 | 6959.07 | 6958.87 | -0.20 | 24.79 | 4.0 | 24.0 |
| MKTF-37 | 10/28/2019 | 9.50 | 9.53 | 0.03 | 6949.54 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 10/29/2019 | 9.37 | 9.40 | 0.03 | 6949.67 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 11/12/2019 | 9.72 | 9.76 | 0.04 | 6949.31 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 2/3/2020 | 9.97 | 10.09 | 0.12 | 6948.98 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 6/30/2020 | 9.81 | 9.83 | 0.02 | 6949.24 | 6959.07 | 6958.87 | -0.20 | 24.80 | 4.0 | 24.0 |
| MKTF-37 | 9/14/2020 | ND | 8.96 | NA | 6950.11 | 6959.07 | 6958.87 | -0.20 | 24.74 | 4.0 | 24.0 |
| MKTF-37 | 11/10/2020 | 9.56 | 9.57 | 0.01 | 6949.50 | 6959.07 | 6958.87 | -0.20 | 24.74 | 4.0 | 24.0 |
| MKTF-37 | 12/4/2020 | 9.84 | 9.85 | 0.01 | 6949.22 | 6959.07 | 6958.87 | -0.20 | 24.81 | 4.0 | 24.0 |
| MKTF-37 | 1/28/2021 | 9.84 | 9.85 | 0.01 | 6949.22 | 6959.07 | 6958.87 | -0.20 | 24.81 | 4.0 | 24.0 |
| MKTF-37 | 2/28/2021 | 9.85 | 9.87 | 0.02 | 6949.20 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 3/31/2021 | 10.03 | 10.05 | 0.02 | 6949.02 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 4/26/2021 | 10.30 | 10.33 | 0.03 | 6948.74 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 5/20/2021 | 9.99 | 10.02 | 0.03 | 6949.05 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 6/1/2021 | 10.06 | 10.10 | 0.04 | 6948.97 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 9/8/2021 | 10.14 | 10.31 | 0.17 | 6948.76 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 12/9/2021 | 10.50 | 10.57 | 0.07 | 6948.50 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 1/10/2022 | 11.30 | 11.45 | 0.15 | 6947.62 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 2/28/2022 | 11.20 | 11.44 | 0.24 | 6947.63 | 6959.07 | 6958.87 | -0.20 | 24.87 | 4.0 | 24.0 |
| MKTF-37 | 3/1/2022 | 10.52 | 10.59 | 0.07 | 6948.48 | 6959.07 | 6958.87 | -0.20 | 24.89 | 4.0 | 24.0 |
| MKTF-37 | 4/27/2022 | 11.52 | 11.75 | 0.23 | 6947.32 | 6959.07 | 6958.87 | -0.20 | 24.89 | 4.0 | 24.0 |
| MKTF-37 | 5/5/2022 | 11.31 | 11.41 | 0.10 | 6947.66 | 6959.07 | 6958.87 | -0.20 | 24.89 | 4.0 | 24.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-37 | 6/1/2022 | 10.59 | 10.64 | 0.05 | 6948.43 | 6959.07 | 6958.87 | -0.20 | 24.90 | 4.0 | 24.0 |
| MKTF-37 | 7/6/2022 | 11.16 | 11.17 | 0.01 | 6947.90 | 6959.07 | 6958.87 | -0.20 | 24.91 | 4.0 | 24.0 |
| MKTF-37 | 8/8/2022 | 11.23 | 11.27 | 0.04 | 6947.80 | 6959.07 | 6958.87 | -0.20 | 24.92 | 4.0 | 24.0 |
| MKTF-37 | 9/5/2022 | 10.55 | 10.61 | 0.06 | 6948.46 | 6959.07 | 6958.87 | -0.20 | 24.92 | 4.0 | 24.0 |
| MKTF-37 | 10/3/2022 | 10.50 | 10.57 | 0.07 | 6948.50 | 6959.07 | 6958.87 | -0.20 | 24.92 | 4.0 | 24.0 |
| MKTF-37 | 11/3/2022 | 10.52 | 10.57 | 0.05 | 6948.50 | 6959.07 | 6958.87 | -0.20 | 24.92 | 4.0 | 24.0 |
| MKTF-37 | 12/6/2022 | 10.80 | 10.84 | 0.04 | 6948.23 | 6959.07 | 6958.87 | -0.20 | 24.92 | 4.0 | 24.0 |
| MKTF-38 | 3/16/2015 | ND | 9.28 | NA | 6945.89 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 6/10/2015 | ND | 9.62 | NA | 6945.55 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 8/24/2015 | ND | 9.53 | NA | 6945.64 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 11/9/2015 | ND | 9.73 | NA | 6945.44 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 2/29/2016 | ND | 8.91 | NA | 6946.26 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 6/8/2016 | ND | 8.71 | NA | 6946.46 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 9/13/2016 | ND | 8.28 | NA | 6946.89 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 11/9/2016 | ND | 9.73 | NA | 6945.44 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 3/14/2017 | ND | 6.69 | NA | 6948.48 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 6/21/2017 | ND | 6.68 | NA | 6948.49 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 9/28/2017 | ND | 6.60 | NA | 6948.57 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 11/30/2017 | ND | 8.11 | NA | 6947.06 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 2/12/2018 | ND | 8.68 | NA | 6946.49 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-38 | 4/25/2018 | ND | 8.07 | NA | 6947.10 | 6955.17 | 6954.89 | -0.28 | 20.56 | 5.0 | 20.0 |
| MKTF-38 | 8/16/2018 | ND | 8.33 | NA | 6946.84 | 6955.17 | 6954.89 | -0.28 | 20.55 | 5.0 | 20.0 |
| MKTF-38 | 11/19/2018 | ND | 9.27 | NA | 6945.90 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 3/26/2019 | ND | 11.58 | NA | 6943.59 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 5/14/2019 | ND | 8.94 | NA | 6946.23 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 6/27/2019 | ND | 9.03 | NA | 6946.14 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 8/20/2019 | ND | 9.05 | NA | 6946.12 | 6955.17 | 6954.89 | -0.28 | 20.55 | 5.0 | 20.0 |
| MKTF-38 | 12/3/2019 | ND | 9.78 | NA | 6945.39 | 6955.17 | 6954.89 | -0.28 | 20.57 | 5.0 | 20.0 |
| MKTF-38 | 3/4/2020 | ND | 9.89 | NA | 6945.28 | 6955.17 | 6954.89 | -0.28 | 20.59 | 5.0 | 20.0 |
| MKTF-38 | 6/26/2020 | ND | 9.66 | NA | 6945.51 | 6955.17 | 6954.89 | -0.28 | 20.61 | 5.0 | 20.0 |
| MKTF-38 | 9/14/2020 | ND | 8.83 | NA | 6946.34 | 6955.17 | 6954.89 | -0.28 | 20.46 | 5.0 | 20.0 |
| MKTF-38 | 11/10/2020 | ND | 9.40 | NA | 6945.77 | 6955.17 | 6954.89 | -0.28 | 20.46 | 5.0 | 20.0 |
| MKTF-38 | 12/4/2020 | 9.63 | 9.64 | 0.01 | 6945.53 | 6955.17 | 6954.89 | -0.28 | 21.58 | 5.0 | 20.0 |
| MKTF-38 | 2/28/2021 | ND | 9.50 | NA | 6945.67 | 6955.17 | 6954.89 | -0.28 | 21.58 | 5.0 | 20.0 |
| MKTF-38 | 2/28/2021 | ND | 9.45 | NA | 6945.72 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 3/31/2021 | ND | 9.58 | NA | 6945.59 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 4/26/2021 | ND | 9.14 | NA | 6946.03 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 5/20/2021 | ND | 9.59 | NA | 6945.58 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 6/1/2021 | ND | 9.23 | NA | 6945.94 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 9/8/2021 | ND | 10.58 | NA | 6944.59 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 12/2/2021 | ND | 10.98 | NA | 6944.19 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 1/10/2022 | ND | 10.96 | NA | 6944.21 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 2/28/2022 | ND | 10.98 | NA | 6944.19 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 3/1/2022 | ND | 10.94 | NA | 6944.23 | 6955.17 | 6954.89 | -0.28 | 20.56 | 5.0 | 20.0 |
| MKTF-38 | 4/27/2022 | ND | 11.40 | NA | 6943.77 | 6955.17 | 6954.89 | -0.28 | 20.56 | 5.0 | 20.0 |
| MKTF-38 | 5/5/2022 | ND | 11.27 | NA | 6943.90 | 6955.17 | 6954.89 | -0.28 | 20.56 | 5.0 | 20.0 |
| MKTF-38 | 6/1/2022 | ND | 10.98 | NA | 6944.19 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-38 | 7/6/2022 | ND | 10.05 | NA | 6945.12 | 6955.17 | 6954.89 | -0.28 | 20.60 | 5.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-38 | 8/8/2022 | ND | 10.50 | NA | 6944.67 | 6955.17 | 6954.89 | -0.28 | 20.62 | 5.0 | 20.0 |
| MKTF-38 | 9/2/2022 | ND | 11.13 | NA | 6944.04 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-38 | 10/3/2022 | ND | 11.21 | NA | 6943.96 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-38 | 11/3/2022 | ND | 11.23 | NA | 6943.94 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-38 | 12/5/2022 | ND | 10.60 | NA | 6944.57 | 6955.17 | 6954.89 | -0.28 | 20.58 | 5.0 | 20.0 |
| MKTF-39 | 11/18/2014 | ND | 10.47 | NA | 6943.50 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 3/16/2015 | ND | 9.10 | NA | 6944.87 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/10/2015 | ND | 9.53 | NA | 6944.44 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 8/23/2015 | ND | 9.46 | NA | 6944.51 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/9/2015 | ND | 9.61 | NA | 6944.36 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 3/3/2016 | ND | 8.72 | NA | 6945.25 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/8/2016 | ND | 8.55 | NA | 6945.42 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 9/13/2016 | ND | 8.62 | NA | 6945.35 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/9/2016 | ND | 9.61 | NA | 6944.36 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 3/14/2017 | ND | 6.66 | NA | 6947.31 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/8/2017 | ND | 6.47 | NA | 6947.50 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 9/28/2017 | ND | 7.54 | NA | 6946.43 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/28/2017 | ND | 7.77 | NA | 6946.20 | 6953.97 | 6953.75 | -0.22 | 15.40 | 5.0 | 15.0 |
| MKTF-39 | 2/8/2018 | ND | 8.40 | NA | 6945.57 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 4/25/2018 | ND | 8.04 | NA | 6945.93 | 6953.97 | 6953.75 | -0.22 | 15.35 | 5.0 | 15.0 |
| MKTF-39 | 8/16/2018 | ND | 8.52 | NA | 6945.45 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/19/2018 | ND | 9.22 | NA | 6944.75 | 6953.97 | 6953.75 | -0.22 | 15.40 | 5.0 | 15.0 |
| MKTF-39 | 3/28/2019 | NA | NA | NA | NA | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/5/2019 | ND | 8.91 | NA | 6945.06 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 8/20/2019 | ND | 9.26 | NA | 6944.71 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/4/2019 | ND | 9.81 | NA | 6944.16 | 6953.97 | 6953.75 | -0.22 | 15.40 | 5.0 | 15.0 |
| MKTF-39 | 2/3/2020 | ND | 10.32 | NA | 6943.65 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/26/2020 | ND | 9.85 | NA | 6944.12 | 6953.97 | 6953.75 | -0.22 | 15.22 | 5.0 | 15.0 |
| MKTF-39 | 9/15/2020 | ND | 9.80 | NA | 6944.17 | 6953.97 | 6953.75 | -0.22 | 14.41 | 5.0 | 15.0 |
| MKTF-39 | 11/10/2020 | ND | 10.27 | NA | 6943.70 | 6953.97 | 6953.75 | -0.22 | 14.41 | 5.0 | 15.0 |
| MKTF-39 | 12/4/2020 | ND | 10.37 | NA | 6943.60 | 6953.97 | 6953.75 | -0.22 | 15.41 | 5.0 | 15.0 |
| MKTF-39 | 1/28/2021 | 9.67 | 11.80 | 2.13 | 6942.17 | 6953.97 | 6953.75 | -0.22 | 15.41 | 5.0 | 15.0 |
| MKTF-39 | 2/28/2021 | 9.53 | 10.24 | 0.71 | 6943.73 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 3/31/2021 | 9.60 | 10.42 | 0.82 | 6943.55 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 4/26/2021 | 11.38 | 11.41 | 0.03 | 6942.56 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 5/20/2021 | 9.58 | 10.44 | 0.86 | 6943.53 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 6/1/2021 | 9.49 | 10.28 | 0.79 | 6943.69 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 9/8/2021 | 9.33 | 9.61 | 0.28 | 6944.36 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 12/3/2021 | 9.88 | 10.27 | 0.39 | 6943.70 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 1/10/2022 | 10.78 | 11.32 | 0.54 | 6942.65 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 2/28/2022 | 10.80 | 11.34 | 0.54 | 6942.63 | 6953.97 | 6953.75 | -0.22 | 15.43 | 5.0 | 15.0 |
| MKTF-39 | 3/1/2022 | 9.90 | 10.30 | 0.40 | 6943.67 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 4/27/2022 | 10.44 | 11.52 | 1.08 | 6942.45 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 5/4/2022 | 11.35 | 12.20 | 0.85 | 6941.77 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 6/1/2022 | 11.47 | 11.97 | 0.50 | 6942.00 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 7/6/2022 | 11.18 | 11.40 | 0.22 | 6942.57 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 8/8/2022 | 10.98 | 11.16 | 0.18 | 6942.81 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 9/5/2022 | 10.74 | 10.95 | 0.21 | 6943.02 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-39 | 10/3/2022 | 10.67 | 10.82 | 0.15 | 6943.15 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 11/3/2022 | 10.65 | 10.79 | 0.14 | 6943.18 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-39 | 12/6/2022 | 10.74 | 10.89 | 0.15 | 6943.08 | 6953.97 | 6953.75 | -0.22 | 15.42 | 5.0 | 15.0 |
| MKTF-40 | 11/18/2014 | ND | 16.96 | NA | 6874.39 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 3/11/2015 | ND | 11.62 | NA | 6879.73 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 6/10/2015 | ND | 11.22 | NA | 6880.13 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 8/21/2015 | ND | 10.85 | NA | 6880.50 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 11/4/2015 | ND | 10.93 | NA | 6880.42 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 2/23/2016 | ND | 10.90 | NA | 6880.45 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 6/9/2016 | ND | 10.33 | NA | 6881.02 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 9/8/2016 | ND | 10.54 | NA | 6880.81 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 11/4/2016 | ND | 10.93 | NA | 6880.42 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 3/7/2017 | ND | 10.16 | NA | 6881.19 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 6/5/2017 | ND | 10.31 | NA | 6881.04 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 9/25/2017 | ND | 10.30 | NA | 6881.05 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 11/21/2017 | ND | 10.73 | NA | 6880.62 | 6891.35 | 6894.33 | 2.98 | 20.64 | 5.0 | 20.0 |
| MKTF-40 | 2/5/2018 | ND | 10.20 | NA | 6881.15 | 6891.35 | 6894.33 | 2.98 | 20.64 | 5.0 | 20.0 |
| MKTF-40 | 4/25/2018 | ND | 9.96 | NA | 6881.39 | 6891.35 | 6894.33 | 2.98 | 20.55 | 5.0 | 20.0 |
| MKTF-40 | 8/15/2018 | ND | 9.76 | NA | 6881.59 | 6891.35 | 6894.33 | 2.98 | 20.56 | 5.0 | 20.0 |
| MKTF-40 | 11/14/2018 | ND | 10.66 | NA | 6880.69 | 6891.35 | 6894.33 | 2.98 | 20.64 | 5.0 | 20.0 |
| MKTF-40 | 2/20/2019 | ND | 9.81 | NA | 6881.54 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 5/6/2019 | ND | 9.38 | NA | 6881.97 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 8/22/2019 | ND | 9.17 | NA | 6882.18 | 6891.35 | 6894.33 | 2.98 | 20.56 | 5.0 | 20.0 |
| MKTF-40 | 10/22/2019 | ND | 10.06 | NA | 6881.29 | 6891.35 | 6894.33 | 2.98 | 20.64 | 5.0 | 20.0 |
| MKTF-40 | 2/27/2020 | ND | 10.25 | NA | 6881.10 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 6/26/2020 | ND | 9.77 | NA | 6881.58 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 9/15/2020 | ND | 10.41 | NA | 6880.94 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 11/10/2020 | ND | 10.73 | NA | 6880.62 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 12/4/2020 | ND | 11.01 | NA | 6880.34 | 6891.35 | 6894.33 | 2.98 | 20.69 | 5.0 | 20.0 |
| MKTF-40 | 1/28/2021 | ND | 11.24 | NA | 6880.11 | 6891.35 | 6894.33 | 2.98 | 20.70 | 5.0 | 20.0 |
| MKTF-40 | 2/28/2021 | ND | 11.19 | NA | 6880.16 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 3/31/2021 | ND | 11.67 | NA | 6879.68 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 4/26/2021 | ND | 12.67 | NA | 6878.68 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 5/20/2021 | ND | 11.65 | NA | 6879.70 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 6/1/2021 | ND | 11.72 | NA | 6879.63 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 9/8/2021 | ND | 11.10 | NA | 6880.25 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 12/16/2021 | ND | 11.37 | NA | 6879.98 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 1/10/2022 | ND | 11.46 | NA | 6879.89 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-40 | 2/28/2022 | ND | 11.42 | NA | 6879.93 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-40 | 3/1/2022 | ND | 11.32 | NA | 6880.03 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 4/27/2022 | ND | 12.12 | NA | 6879.23 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 5/5/2022 | ND | 12.35 | NA | 6879.00 | 6891.35 | 6894.33 | 2.98 | 20.68 | 5.0 | 20.0 |
| MKTF-40 | 6/2/2022 | ND | 12.56 | NA | 6878.79 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-40 | 7/6/2022 | ND | 13.04 | NA | 6878.31 | 6891.35 | 6894.33 | 2.98 | 20.66 | 5.0 | 20.0 |
| MKTF-40 | 8/8/2022 | ND | 12.82 | NA | 6878.53 | 6891.35 | 6894.33 | 2.98 | 20.65 | 5.0 | 20.0 |
| MKTF-40 | 9/2/2022 | ND | 11.11 | NA | 6880.24 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-40 | 10/3/2022 | ND | 11.17 | NA | 6880.18 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-40 | 11/3/2022 | ND | 11.20 | NA | 6880.15 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-40 | 12/8/2022 | ND | 11.23 | NA | 6880.12 | 6891.35 | 6894.33 | 2.98 | 20.67 | 5.0 | 20.0 |
| MKTF-41 | 11/18/2014 | ND | 24.37 | NA | 6866.74 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 3/12/2015 | ND | 17.54 | NA | 6873.57 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 6/9/2015 | ND | 17.24 | NA | 6873.87 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 8/21/2015 | ND | 17.37 | NA | 6873.74 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 11/5/2015 | ND | 17.24 | NA | 6873.87 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 2/24/2016 | ND | 17.37 | NA | 6873.74 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 6/9/2016 | ND | 17.12 | NA | 6873.99 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 9/9/2016 | ND | 17.58 | NA | 6873.53 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 11/5/2016 | ND | 17.24 | NA | 6873.87 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 3/7/2017 | ND | 17.07 | NA | 6874.04 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 6/6/2017 | ND | 15.96 | NA | 6875.15 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 9/25/2017 | ND | 17.72 | NA | 6873.39 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 11/27/2017 | ND | 17.28 | NA | 6873.83 | 6891.11 | 6893.64 | 2.53 | 37.18 | 22.0 | 37.0 |
| MKTF-41 | 2/7/2018 | ND | 17.70 | NA | 6873.41 | 6891.11 | 6893.64 | 2.53 | 37.19 | 22.0 | 37.0 |
| MKTF-41 | 4/25/2018 | ND | 17.44 | NA | 6873.67 | 6891.11 | 6893.64 | 2.53 | 37.38 | 22.0 | 37.0 |
| MKTF-41 | 8/15/2018 | ND | 17.73 | NA | 6873.38 | 6891.11 | 6893.64 | 2.53 | 37.21 | 22.0 | 37.0 |
| MKTF-41 | 11/14/2018 | ND | 17.98 | NA | 6873.13 | 6891.11 | 6893.64 | 2.53 | 37.18 | 22.0 | 37.0 |
| MKTF-41 | 2/13/2019 | ND | 17.57 | NA | 6873.54 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 5/7/2019 | ND | 16.99 | NA | 6874.12 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 8/22/2019 | ND | 17.02 | NA | 6874.09 | 6891.11 | 6893.64 | 2.53 | 37.21 | 22.0 | 37.0 |
| MKTF-41 | 10/23/2019 | ND | 17.49 | NA | 6873.62 | 6891.11 | 6893.64 | 2.53 | 37.18 | 22.0 | 37.0 |
| MKTF-41 | 2/26/2020 | ND | 17.62 | NA | 6873.49 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 6/29/2020 | ND | 17.24 | NA | 6873.87 | 6891.11 | 6893.64 | 2.53 | 37.57 | 22.0 | 37.0 |
| MKTF-41 | 9/14/2020 | ND | 18.19 | NA | 6872.92 | 6891.11 | 6893.64 | 2.53 | 37.13 | 22.0 | 37.0 |
| MKTF-41 | 11/10/2020 | ND | 18.48 | NA | 6872.63 | 6891.11 | 6893.64 | 2.53 | 37.13 | 22.0 | 37.0 |
| MKTF-41 | 12/4/2020 | ND | 18.37 | NA | 6872.74 | 6891.11 | 6893.64 | 2.53 | 37.27 | 22.0 | 37.0 |
| MKTF-41 | 1/28/2021 | ND | 18.68 | NA | 6872.43 | 6891.11 | 6893.64 | 2.53 | 37.41 | 22.0 | 37.0 |
| MKTF-41 | 2/27/2021 | ND | 18.58 | NA | 6872.53 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 3/31/2021 | ND | 18.88 | NA | 6872.23 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 4/26/2021 | ND | 18.88 | NA | 6872.23 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 5/20/2021 | ND | 18.87 | NA | 6872.24 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 6/1/2021 | ND | 18.61 | NA | 6872.50 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 9/9/2021 | ND | 19.27 | NA | 6871.84 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 11/30/2021 | ND | 18.82 | NA | 6872.29 | 6891.11 | 6893.64 | 2.53 | 37.32 | 22.0 | 37.0 |
| MKTF-41 | 1/10/2022 | ND | 19.27 | NA | 6871.84 | 6891.11 | 6893.64 | 2.53 | 37.27 | 22.0 | 37.0 |
| MKTF-41 | 2/28/2022 | ND | 19.52 | NA | 6871.59 | 6891.11 | 6893.64 | 2.53 | 37.27 | 22.0 | 37.0 |
| MKTF-41 | 3/1/2022 | ND | 18.90 | NA | 6872.21 | 6891.11 | 6893.64 | 2.53 | 37.23 | 22.0 | 37.0 |
| MKTF-41 | 4/27/2022 | ND | 18.78 | NA | 6872.33 | 6891.11 | 6893.64 | 2.53 | 37.23 | 22.0 | 37.0 |
| MKTF-41 | 5/5/2022 | ND | 18.79 | NA | 6872.32 | 6891.11 | 6893.64 | 2.53 | 37.23 | 22.0 | 37.0 |
| MKTF-41 | 6/1/2022 | ND | 18.85 | NA | 6872.26 | 6891.11 | 6893.64 | 2.53 | 37.24 | 22.0 | 37.0 |
| MKTF-41 | 7/6/2022 | ND | 18.42 | NA | 6872.69 | 6891.11 | 6893.64 | 2.53 | 37.25 | 22.0 | 37.0 |
| MKTF-41 | 8/8/2022 | ND | 19.59 | NA | 6871.52 | 6891.11 | 6893.64 | 2.53 | 37.26 | 22.0 | 37.0 |
| MKTF-41 | 9/2/2022 | ND | 18.57 | NA | 6872.54 | 6891.11 | 6893.64 | 2.53 | 37.24 | 22.0 | 37.0 |
| MKTF-41 | 10/3/2022 | ND | 18.58 | NA | 6872.53 | 6891.11 | 6893.64 | 2.53 | 37.24 | 22.0 | 37.0 |
| MKTF-41 | 11/3/2022 | ND | 18.57 | NA | 6872.54 | 6891.11 | 6893.64 | 2.53 | 37.24 | 22.0 | 37.0 |
| MKTF-41 | 12/29/2022 | ND | 18.65 | NA | 6872.46 | 6891.11 | 6893.64 | 2.53 | 37.22 | 22.0 | 37.0 |
| MKTF-42 | 11/18/2014 | ND | 16.26 | NA | 6874.16 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-42 | 3/11/2015 | ND | 15.44 | NA | 6874.98 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 6/9/2015 | ND | 15.07 | NA | 6875.35 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 8/21/2015 | ND | 14.91 | NA | 6875.51 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 11/5/2015 | ND | 14.73 | NA | 6875.69 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 2/24/2016 | ND | 15.16 | NA | 6875.26 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 6/9/2016 | ND | 14.77 | NA | 6875.65 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 9/9/2016 | ND | 14.77 | NA | 6875.65 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 11/5/2016 | ND | 14.73 | NA | 6875.69 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 3/7/2017 | ND | 13.19 | NA | 6877.23 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 6/6/2017 | ND | 14.59 | NA | 6875.83 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 9/25/2017 | ND | 14.30 | NA | 6876.12 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 11/27/2017 | ND | 14.28 | NA | 6876.14 | 6890.42 | 6892.95 | 2.53 | 30.65 | 10.0 | 30.0 |
| MKTF-42 | 2/7/2018 | ND | 14.88 | NA | 6875.54 | 6890.42 | 6892.95 | 2.53 | 30.37 | 10.0 | 30.0 |
| MKTF-42 | 4/25/2018 | ND | 14.60 | NA | 6875.82 | 6890.42 | 6892.95 | 2.53 | 30.55 | 10.0 | 30.0 |
| MKTF-42 | 8/15/2018 | ND | 14.24 | NA | 6876.18 | 6890.42 | 6892.95 | 2.53 | 30.67 | 10.0 | 30.0 |
| MKTF-42 | 11/14/2018 | ND | 14.41 | NA | 6876.01 | 6890.42 | 6892.95 | 2.53 | 30.65 | 10.0 | 30.0 |
| MKTF-42 | 2/13/2019 | ND | 14.65 | NA | 6875.77 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 5/7/2019 | ND | 14.15 | NA | 6876.27 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 8/22/2019 | ND | 13.87 | NA | 6876.55 | 6890.42 | 6892.95 | 2.53 | 30.67 | 10.0 | 30.0 |
| MKTF-42 | 10/23/2019 | ND | 13.99 | NA | 6876.43 | 6890.42 | 6892.95 | 2.53 | 30.65 | 10.0 | 30.0 |
| MKTF-42 | 2/26/2020 | ND | 14.26 | NA | 6876.16 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 6/30/2020 | ND | 13.72 | NA | 6876.70 | 6890.42 | 6892.95 | 2.53 | 30.62 | 10.0 | 30.0 |
| MKTF-42 | 9/14/2020 | ND | 13.82 | NA | 6876.60 | 6890.42 | 6892.95 | 2.53 | 30.57 | 10.0 | 30.0 |
| MKTF-42 | 11/10/2020 | ND | 12.77 | NA | 6877.65 | 6890.42 | 6892.95 | 2.53 | 30.57 | 10.0 | 30.0 |
| MKTF-42 | 12/4/2020 | ND | 13.88 | NA | 6876.54 | 6890.42 | 6892.95 | 2.53 | 30.42 | 10.0 | 30.0 |
| MKTF-42 | 1/28/2021 | ND | 14.32 | NA | 6876.10 | 6890.42 | 6892.95 | 2.53 | 30.42 | 10.0 | 30.0 |
| MKTF-42 | 2/27/2021 | ND | 14.30 | NA | 6876.12 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 3/31/2021 | ND | 14.64 | NA | 6875.78 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 4/26/2021 | ND | 16.38 | NA | 6874.04 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 5/20/2021 | ND | 14.57 | NA | 6875.85 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 6/1/2021 | ND | 14.54 | NA | 6875.88 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 9/9/2021 | ND | 14.45 | NA | 6875.97 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 11/30/2021 | ND | 14.27 | NA | 6876.15 | 6890.42 | 6892.95 | 2.53 | 30.71 | 10.0 | 30.0 |
| MKTF-42 | 1/10/2022 | ND | 14.68 | NA | 6875.74 | 6890.42 | 6892.95 | 2.53 | 30.67 | 10.0 | 30.0 |
| MKTF-42 | 2/28/2022 | ND | 14.67 | NA | 6875.75 | 6890.42 | 6892.95 | 2.53 | 30.67 | 10.0 | 30.0 |
| MKTF-42 | 3/1/2022 | ND | 14.67 | NA | 6875.75 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 4/27/2022 | ND | 14.60 | NA | 6875.82 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 5/5/2022 | ND | 14.59 | NA | 6875.83 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 6/1/2022 | 14.72 | 14.74 | 0.02 | 6875.68 | 6890.42 | 6892.95 | 2.53 | 16.45 | 10.0 | 30.0 |
| MKTF-42 | 7/6/2022 | 15.50 | 15.52 | 0.02 | 6874.90 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 8/8/2022 | 15.15 | 15.17 | 0.02 | 6875.25 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 9/5/2022 | 14.24 | 14.27 | 0.03 | 6876.15 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 10/3/2022 | 14.17 | 14.25 | 0.08 | 6876.17 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 11/3/2022 | 14.07 | 14.18 | 0.11 | 6876.24 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-42 | 12/1/2022 | 14.36 | 14.67 | 0.31 | 6875.75 | 6890.42 | 6892.95 | 2.53 | 30.64 | 10.0 | 30.0 |
| MKTF-43 | 11/18/2014 | ND | 4.17 | NA | 6869.95 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 3/11/2015 | ND | 2.42 | NA | 6871.70 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 6/10/2015 | ND | 0.85 | NA | 6873.27 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-43 | 8/21/2015 | ND | 1.02 | NA | 6873.10 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 11/5/2015 | ND | 2.34 | NA | 6871.78 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 2/24/2016 | ND | 2.22 | NA | 6871.90 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 6/9/2016 | ND | 0.89 | NA | 6873.23 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 9/9/2016 | ND | 1.20 | NA | 6872.92 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 11/5/2016 | ND | 2.34 | NA | 6871.78 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 3/8/2017 | ND | 2.56 | NA | 6871.56 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 6/6/2017 | ND | 0.84 | NA | 6873.28 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 9/25/2017 | ND | 1.36 | NA | 6872.76 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 11/27/2017 | ND | 2.87 | NA | 6871.25 | 6874.12 | 6876.90 | 2.78 | 12.60 | 2.0 | 12.0 |
| MKTF-43 | 2/7/2018 | ND | 3.65 | NA | 6870.47 | 6874.12 | 6876.90 | 2.78 | 12.60 | 2.0 | 12.0 |
| MKTF-43 | 4/25/2018 | ND | 2.27 | NA | 6871.85 | 6874.12 | 6876.90 | 2.78 | 12.52 | 2.0 | 12.0 |
| MKTF-43 | 8/15/2018 | ND | -0.12 | NA | 6874.24 | 6874.12 | 6876.90 | 2.78 | 12.63 | 2.0 | 12.0 |
| MKTF-43 | 11/14/2018 | ND | 2.64 | NA | 6871.48 | 6874.12 | 6876.90 | 2.78 | 12.60 | 2.0 | 12.0 |
| MKTF-43 | 2/13/2019 | ND | 3.21 | NA | 6870.91 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 5/8/2019 | ND | 1.19 | NA | 6872.93 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 8/22/2019 | ND | 0.89 | NA | 6873.23 | 6874.12 | 6876.90 | 2.78 | 12.63 | 2.0 | 12.0 |
| MKTF-43 | 10/24/2019 | ND | 1.56 | NA | 6872.56 | 6874.12 | 6876.90 | 2.78 | 12.60 | 2.0 | 12.0 |
| MKTF-43 | 2/26/2020 | ND | 3.55 | NA | 6870.57 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 6/30/2020 | ND | 2.72 | NA | 6871.40 | 6874.12 | 6876.90 | 2.78 | 12.65 | 2.0 | 12.0 |
| MKTF-43 | 9/14/2020 | ND | 3.67 | NA | 6870.45 | 6874.12 | 6876.90 | 2.78 | 13.44 | 2.0 | 12.0 |
| MKTF-43 | 11/10/2020 | ND | 4.70 | NA | 6869.42 | 6874.12 | 6876.90 | 2.78 | 13.44 | 2.0 | 12.0 |
| MKTF-43 | 12/4/2020 | ND | 5.34 | NA | 6868.78 | 6874.12 | 6876.90 | 2.78 | 14.14 | 2.0 | 12.0 |
| MKTF-43 | 1/28/2021 | ND | 5.91 | NA | 6868.21 | 6874.12 | 6876.90 | 2.78 | 14.14 | 2.0 | 12.0 |
| MKTF-43 | 2/27/2021 | ND | 5.89 | NA | 6868.23 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 3/31/2021 | ND | 5.71 | NA | 6868.41 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 4/26/2021 | ND | 5.88 | NA | 6868.24 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 5/20/2021 | ND | 5.69 | NA | 6868.43 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 6/1/2021 | ND | 5.83 | NA | 6868.29 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 9/9/2021 | ND | 5.17 | NA | 6868.95 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 11/30/2021 | ND | 6.17 | NA | 6867.95 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 1/10/2022 | ND | 6.10 | NA | 6868.02 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 2/28/2022 | ND | 6.09 | NA | 6868.03 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 3/1/2022 | ND | 6.26 | NA | 6867.86 | 6874.12 | 6876.90 | 2.78 | 14.15 | 2.0 | 12.0 |
| MKTF-43 | 4/27/2022 | ND | 5.68 | NA | 6868.44 | 6874.12 | 6876.90 | 2.78 | 14.15 | 2.0 | 12.0 |
| MKTF-43 | 5/5/2022 | ND | 5.73 | NA | 6868.39 | 6874.12 | 6876.90 | 2.78 | 14.15 | 2.0 | 12.0 |
| MKTF-43 | 6/1/2022 | ND | 5.26 | NA | 6868.86 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 7/6/2022 | ND | 5.44 | NA | 6868.68 | 6874.12 | 6876.90 | 2.78 | 14.19 | 2.0 | 12.0 |
| MKTF-43 | 8/8/2022 | ND | 5.57 | NA | 6868.55 | 6874.12 | 6876.90 | 2.78 | 14.21 | 2.0 | 12.0 |
| MKTF-43 | 9/2/2022 | ND | 5.37 | NA | 6868.75 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 10/3/2022 | ND | 5.39 | NA | 6868.73 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 11/3/2022 | ND | 5.43 | NA | 6868.69 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-43 | 12/22/2022 | ND | 5.32 | NA | 6868.80 | 6874.12 | 6876.90 | 2.78 | 14.17 | 2.0 | 12.0 |
| MKTF-44 | 11/18/2014 | ND | 46.26 | NA | 6821.15 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 3/12/2015 | ND | 35.90 | NA | 6831.51 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 6/10/2015 | ND | 27.01 | NA | 6840.40 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 8/17/2015 | ND | 28.69 | NA | 6838.72 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 11/9/2015 | ND | 30.78 | NA | 6836.63 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-44 | 2/24/2016 | ND | 26.20 | NA | 6841.21 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 6/9/2016 | ND | 25.29 | NA | 6842.12 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 9/8/2016 | ND | 28.80 | NA | 6838.61 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 11/9/2016 | ND | 30.78 | NA | 6836.63 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 3/8/2017 | ND | 22.85 | NA | 6844.56 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 6/5/2017 | ND | 30.36 | NA | 6837.05 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 9/25/2017 | ND | 27.64 | NA | 6839.77 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 11/27/2017 | ND | 31.16 | NA | 6836.25 | 6867.41 | 6869.95 | 2.54 | 48.62 | 38.0 | 48.0 |
| MKTF-44 | 2/7/2018 | ND | 35.02 | NA | 6832.39 | 6867.41 | 6869.95 | 2.54 | 48.62 | 38.0 | 48.0 |
| MKTF-44 | 4/25/2018 | ND | 34.18 | NA | 6833.23 | 6867.41 | 6869.95 | 2.54 | 48.54 | 38.0 | 48.0 |
| MKTF-44 | 8/15/2018 | ND | 33.16 | NA | 6834.25 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 11/14/2018 | ND | 23.88 | NA | 6843.53 | 6867.41 | 6869.95 | 2.54 | 48.62 | 38.0 | 48.0 |
| MKTF-44 | 2/13/2019 | ND | 30.85 | NA | 6836.56 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 5/8/2019 | ND | 31.66 | NA | 6835.75 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 8/22/2019 | ND | 28.42 | NA | 6838.99 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 10/24/2019 | ND | 36.00 | NA | 6831.41 | 6867.41 | 6869.95 | 2.54 | 48.62 | 38.0 | 48.0 |
| MKTF-44 | 3/4/2020 | ND | 27.80 | NA | 6839.61 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 6/26/2020 | ND | 30.54 | NA | 6836.87 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 9/14/2020 | ND | 25.46 | NA | 6841.95 | 6867.41 | 6869.95 | 2.54 | 49.41 | 38.0 | 48.0 |
| MKTF-44 | 12/4/2020 | ND | 37.05 | NA | 6830.36 | 6867.41 | 6869.95 | 2.54 | 48.85 | 38.0 | 48.0 |
| MKTF-44 | 2/28/2021 | ND | 35.96 | NA | 6831.45 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 3/31/2021 | ND | 42.74 | NA | 6824.67 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 4/26/2021 | ND | 42.79 | NA | 6824.62 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 5/20/2021 | ND | 42.57 | NA | 6824.84 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 6/1/2021 | ND | 41.74 | NA | 6825.67 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 9/7/2021 | ND | 31.71 | NA | 6835.70 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 12/22/2021 | ND | 36.06 | NA | 6831.35 | 6867.41 | 6869.95 | 2.54 | 48.96 | 38.0 | 48.0 |
| MKTF-44 | 3/1/2022 | ND | 38.86 | NA | 6828.55 | 6867.41 | 6869.95 | 2.54 | 48.71 | 38.0 | 48.0 |
| MKTF-44 | 6/2/2022 | ND | 33.24 | NA | 6834.17 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 7/6/2022 | ND | 34.62 | NA | 6832.79 | 6867.41 | 6869.95 | 2.54 | 48.61 | 38.0 | 48.0 |
| MKTF-44 | 8/8/2022 | ND | 33.67 | NA | 6833.74 | 6867.41 | 6869.95 | 2.54 | 48.56 | 38.0 | 48.0 |
| MKTF-44 | 9/27/2022 | ND | 33.86 | NA | 6833.55 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 10/3/2022 | ND | 33.89 | NA | 6833.52 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 11/3/2022 | ND | 33.98 | NA | 6833.43 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-44 | 12/22/2022 | ND | 33.98 | NA | 6833.43 | 6867.41 | 6869.95 | 2.54 | 48.66 | 38.0 | 48.0 |
| MKTF-45 | 2/10/2015 | 12.62 | 15.56 | 2.94 | 6933.07 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 3/17/2015 | 12.18 | 13.98 | 1.80 | 6934.65 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 6/8/2015 | 12.24 | 15.79 | 3.55 | 6932.84 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 8/18/2015 | 12.54 | 12.65 | 0.11 | 6935.98 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/3/2015 | 12.74 | 13.06 | 0.32 | 6935.57 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 3/17/2016 | 12.18 | 13.98 | 1.80 | 6934.65 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 6/10/2016 | 11.52 | 11.84 | 0.32 | 6936.79 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 9/13/2016 | 10.99 | 11.44 | 0.45 | 6937.19 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/3/2016 | 12.74 | 13.06 | 0.32 | 6935.57 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 3/1/2017 | 9.36 | 9.67 | 0.31 | 6938.96 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 6/14/2017 | 10.54 | 11.04 | 0.50 | 6937.59 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 10/3/2017 | 10.52 | 11.05 | 0.53 | 6937.58 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/30/2017 | 11.80 | 12.27 | 0.47 | 6936.36 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-45 | 2/15/2018 | 12.13 | 12.28 | 0.15 | 6936.35 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 4/26/2018 | 11.91 | 12.34 | 0.43 | 6936.29 | 6948.63 | 6949.59 | 0.96 | 29.32 | -- | -- |
| MKTF-45 | 8/16/2018 | 12.19 | 12.62 | 0.43 | 6936.01 | 6948.63 | 6949.59 | 0.96 | 29.37 | -- | -- |
| MKTF-45 | 11/27/2018 | 12.64 | 13.19 | 0.55 | 6935.44 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 3/26/2019 | 11.04 | 11.54 | 0.50 | 6937.09 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 5/14/2019 | 11.47 | 12.06 | 0.59 | 6936.57 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 8/19/2019 | 13.06 | 13.52 | 0.46 | 6935.11 | 6948.63 | 6949.59 | 0.96 | 29.37 | -- | -- |
| MKTF-45 | 10/28/2019 | 11.01 | 12.04 | 1.03 | 6936.59 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 10/29/2019 | 10.42 | 12.79 | 2.37 | 6935.84 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/6/2019 | 8.61 | 21.56 | 12.95 | 6927.07 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/7/2019 | 8.04 | 21.29 | 13.25 | 6927.34 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/11/2019 | 7.79 | 22.64 | 14.85 | 6925.99 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/12/2019 | 8.66 | 22.96 | 14.30 | 6925.67 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/13/2019 | 8.74 | 24.97 | 16.23 | 6923.66 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/14/2019 | 9.10 | 24.33 | 15.23 | 6924.30 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/15/2019 | 9.32 | 23.61 | 14.29 | 6925.02 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/19/2019 | 9.88 | 21.79 | 11.91 | 6926.84 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 11/21/2019 | 10.04 | 20.94 | 10.90 | 6927.69 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 12/2/2019 | 11.42 | 17.99 | 6.57 | 6930.64 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 2/3/2020 | 8.64 | 17.66 | 9.02 | 6930.97 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 6/30/2020 | 10.12 | 18.12 | 8.00 | 6930.51 | 6948.63 | 6949.59 | 0.96 | 29.28 | -- | -- |
| MKTF-45 | 9/14/2020 | 12.18 | 17.47 | 5.29 | 6931.16 | 6948.63 | 6949.59 | 0.96 | 36.49 | -- | -- |
| MKTF-45 | 11/10/2020 | 11.98 | 13.80 | 1.82 | 6934.83 | 6948.63 | 6949.59 | 0.96 | 36.49 | -- | -- |
| MKTF-45 | 12/4/2020 | 11.70 | 13.55 | 1.85 | 6935.08 | 6948.63 | 6949.59 | 0.96 | 29.49 | -- | -- |
| MKTF-45 | 1/28/2021 | 15.04 | 15.17 | 0.13 | 6933.46 | 6948.63 | 6949.59 | 0.96 | 29.49 | -- | -- |
| MKTF-45 | 2/27/2021 | 12.59 | 12.60 | 0.01 | 6936.03 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 3/31/2021 | 14.59 | 14.61 | 0.02 | 6934.02 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 4/26/2021 | 15.38 | 15.41 | 0.03 | 6933.22 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 5/20/2021 | 14.54 | 15.05 | 0.51 | 6933.58 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 6/1/2021 | 15.07 | 15.09 | 0.02 | 6933.54 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 9/9/2021 | 13.44 | 13.49 | 0.05 | 6935.14 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 12/9/2021 | 13.35 | 13.39 | 0.04 | 6935.24 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 1/10/2022 | ND | 13.74 | NA | 6934.89 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 2/28/2022 | ND | 13.59 | NA | 6935.04 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 3/2/2022 | 13.32 | 13.37 | 0.05 | 6935.26 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 4/27/2022 | 14.12 | 14.15 | 0.03 | 6934.48 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 5/2/2022 | ND | 14.28 | NA | 6934.35 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 6/1/2022 | 14.53 | 14.67 | 0.14 | 6933.96 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 7/6/2022 | 14.43 | 14.61 | 0.18 | 6934.02 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 8/8/2022 | 14.23 | 14.40 | 0.17 | 6934.23 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 9/2/2022 | 14.48 | 14.62 | 0.14 | 6934.01 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 10/3/2022 | 14.07 | 14.09 | 0.02 | 6934.54 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 11/3/2022 | 14.15 | 14.17 | 0.02 | 6934.46 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-45 | 12/9/2022 | 14.05 | 14.15 | 0.10 | 6934.48 | 6948.63 | 6949.59 | 0.96 | 29.54 | -- | -- |
| MKTF-46 | 10/29/2019 | ND | 7.41 | NA | NA | 6954.73 | NA | 2.87 | 18.42 | 3.0 | 18.0 |
| MKTF-46 | 11/12/2019 | ND | 7.59 | NA | NA | 6954.73 | NA | 2.87 | 18.42 | 3.0 | 18.0 |
| MKTF-46 | 12/2/2019 | ND | 7.83 | NA | NA | 6954.73 | NA | 2.87 | 18.42 | 3.0 | 18.0 |
| MKTF-46 | 3/5/2020 | ND | 8.06 | NA | 6946.67 | 6954.73 | 6957.60 | 2.87 | 15.13 | 3.0 | 18.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-46 | 6/30/2020 | ND | 8.21 | NA | 6946.52 | 6954.73 | 6957.60 | 2.87 | 15.13 | 3.0 | 18.0 |
| MKTF-46 | 9/14/2020 | ND | 7.31 | NA | 6947.42 | 6954.73 | 6957.60 | 2.87 | 22.42 | 3.0 | 18.0 |
| MKTF-46 | 11/10/2020 | ND | 7.70 | NA | 6947.03 | 6954.73 | 6957.60 | 2.87 | 22.42 | 3.0 | 18.0 |
| MKTF-46 | 12/4/2020 | ND | 7.90 | NA | 6946.83 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 1/28/2021 | ND | 8.45 | NA | 6946.28 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 2/27/2021 | ND | 7.95 | NA | 6946.78 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 3/31/2021 | ND | 8.03 | NA | 6946.70 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 4/26/2021 | ND | 8.26 | NA | 6946.47 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 5/20/2021 | ND | 8.16 | NA | 6946.57 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 6/1/2021 | ND | 8.22 | NA | 6946.51 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 9/9/2021 | ND | 9.29 | NA | 6945.44 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 11/30/2021 | ND | 9.89 | NA | 6944.84 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 1/10/2022 | ND | 10.29 | NA | 6944.44 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 2/28/2022 | ND | 10.26 | NA | 6944.47 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 3/1/2022 | ND | 9.93 | NA | 6944.80 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 4/27/2022 | ND | 10.72 | NA | 6944.01 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 5/5/2022 | ND | 10.74 | NA | 6943.99 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 6/1/2022 | ND | 11.14 | NA | 6943.59 | 6954.73 | 6957.60 | 2.87 | 18.41 | 3.0 | 18.0 |
| MKTF-46 | 7/6/2022 | ND | 10.89 | NA | 6943.84 | 6954.73 | 6957.60 | 2.87 | 18.39 | 3.0 | 18.0 |
| MKTF-46 | 8/8/2022 | ND | 11.01 | NA | 6943.72 | 6954.73 | 6957.60 | 2.87 | 18.37 | 3.0 | 18.0 |
| MKTF-46 | 9/2/2022 | ND | 10.14 | NA | 6944.59 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 10/3/2022 | ND | 10.22 | NA | 6944.51 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 11/3/2022 | ND | 10.25 | NA | 6944.48 | 6954.73 | 6957.60 | 2.87 | 18.43 | 3.0 | 18.0 |
| MKTF-46 | 12/6/2022 | ND | 9.33 | NA | 6945.40 | 6954.73 | 6957.60 | 2.87 | 18.93 | 3.0 | 18.0 |
| MKTF-47 | 12/2/2019 | ND | 10.20 | NA | NA | 6959.51 | NA | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 3/5/2020 | ND | 10.31 | NA | 6949.20 | 6959.51 | 6959.09 | -0.42 | 14.42 | 4.0 | 14.0 |
| MKTF-47 | 6/29/2020 | ND | 9.92 | NA | 6949.59 | 6959.51 | 6959.09 | -0.42 | 14.42 | 4.0 | 14.0 |
| MKTF-47 | 9/15/2020 | 8.95 | 8.96 | 0.01 | 6950.55 | 6959.51 | 6959.09 | -0.42 | 14.73 | 4.0 | 14.0 |
| MKTF-47 | 11/10/2020 | ND | 9.75 | NA | 6949.76 | 6959.51 | 6959.09 | -0.42 | 14.73 | 4.0 | 14.0 |
| MKTF-47 | 12/4/2020 | 10.00 | 10.01 | 0.01 | 6949.50 | 6959.51 | 6959.09 | -0.42 | 14.73 | 4.0 | 14.0 |
| MKTF-47 | 1/28/2021 | ND | 9.76 | NA | 6949.75 | 6959.51 | 6959.09 | -0.42 | 14.73 | 4.0 | 14.0 |
| MKTF-47 | 2/28/2021 | ND | 9.57 | NA | 6949.94 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 3/31/2021 | ND | Dry | NA | Dry | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 4/26/2021 | ND | Dry | NA | Dry | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 5/20/2021 | ND | Dry | NA | Dry | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 6/1/2021 | ND | Dry | NA | Dry | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 9/9/2021 | ND | Dry | NA | Dry | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 12/3/2021 | 11.39 | 11.43 | 0.04 | 6948.08 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 1/10/2022 | 11.37 | 11.42 | 0.05 | 6948.09 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 2/28/2022 | 11.42 | 11.47 | 0.05 | 6948.04 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 3/2/2022 | 11.42 | 11.47 | 0.05 | 6948.04 | 6959.51 | 6959.09 | -0.42 | 14.74 | 4.0 | 14.0 |
| MKTF-47 | 4/27/2022 | 11.66 | 11.70 | 0.04 | 6947.81 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 5/5/2022 | 11.64 | 11.66 | 0.02 | 6947.85 | 6959.51 | 6959.09 | -0.42 | 14.72 | 4.0 | 14.0 |
| MKTF-47 | 6/2/2022 | 11.37 | 11.43 | 0.06 | 6948.08 | 6959.51 | 6959.09 | -0.42 | 14.77 | 4.0 | 14.0 |
| MKTF-47 | 7/6/2022 | 11.10 | 11.17 | 0.07 | 6948.34 | 6959.51 | 6959.09 | -0.42 | 14.82 | 4.0 | 14.0 |
| MKTF-47 | 8/8/2022 | 11.12 | 11.19 | 0.07 | 6948.32 | 6959.51 | 6959.09 | -0.42 | 14.87 | 4.0 | 14.0 |
| MKTF-47 | 9/5/2022 | 11.57 | 11.67 | 0.10 | 6947.84 | 6959.51 | 6959.09 | -0.42 | 14.87 | 4.0 | 14.0 |
| MKTF-47 | 10/3/2022 | 11.60 | 11.71 | 0.11 | 6947.80 | 6959.51 | 6959.09 | -0.42 | 14.87 | 4.0 | 14.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-47 | 11/3/2022 | 11.62 | 11.71 | 0.09 | 6947.80 | 6959.51 | 6959.09 | -0.42 | 14.87 | 4.0 | 14.0 |
| MKTF-47 | 12/6/2022 | 11.58 | 11.67 | 0.09 | 6947.84 | 6959.51 | 6959.09 | -0.42 | 14.87 | 4.0 | 14.0 |
| MKTF-48 | 12/2/2019 | ND | 9.36 | NA | NA | 6959.24 | NA | 2.49 | 18.43 | 2.0 | 17.0 |
| MKTF-48 | 3/3/2020 | 10.17 | 10.33 | 0.16 | 6948.91 | 6959.24 | 6961.73 | 2.49 | 15.51 | 2.0 | 17.0 |
| MKTF-48 | 6/29/2020 | ND | 9.09 | NA | 6950.15 | 6959.24 | 6961.73 | 2.49 | 15.51 | 2.0 | 17.0 |
| MKTF-48 | 9/15/2020 | 9.36 | 9.37 | 0.01 | 6949.87 | 6959.24 | 6961.73 | 2.49 | 17.42 | 2.0 | 17.0 |
| MKTF-48 | 11/10/2020 | 9.91 | 10.02 | 0.11 | 6949.22 | 6959.24 | 6961.73 | 2.49 | 17.42 | 2.0 | 17.0 |
| MKTF-48 | 12/4/2020 | 10.28 | 10.61 | 0.33 | 6948.63 | 6959.24 | 6961.73 | 2.49 | 18.45 | 2.0 | 17.0 |
| MKTF-48 | 1/28/2021 | 9.70 | 9.71 | 0.01 | 6949.53 | 6959.24 | 6961.73 | 2.49 | 19.48 | 2.0 | 17.0 |
| MKTF-48 | 2/27/2021 | 9.70 | 9.76 | 0.06 | 6949.48 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 3/31/2021 | 9.92 | 10.16 | 0.24 | 6949.08 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 4/26/2021 | 11.22 | 11.46 | 0.24 | 6947.78 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 5/20/2021 | 9.89 | 10.03 | 0.14 | 6949.21 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 6/1/2021 | 10.15 | 10.39 | 0.24 | 6948.85 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 9/9/2021 | 10.83 | 11.05 | 0.22 | 6948.19 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 12/3/2021 | 11.85 | 12.39 | 0.54 | 6946.85 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 1/10/2022 | 12.07 | 12.36 | 0.29 | 6946.88 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 2/28/2022 | 12.12 | 12.32 | 0.20 | 6946.92 | 6959.24 | 6961.73 | 2.49 | 18.46 | 2.0 | 17.0 |
| MKTF-48 | 3/2/2022 | 7.89 | 9.34 | 1.45 | 6949.90 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 4/27/2022 | 7.89 | 9.34 | 1.45 | 6949.90 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 5/5/2022 | 7.89 | 9.35 | 1.46 | 6949.89 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 6/2/2022 | 7.86 | 9.31 | 1.45 | 6949.93 | 6959.24 | 6961.73 | 2.49 | 18.56 | 2.0 | 17.0 |
| MKTF-48 | 7/6/2022 | 8.62 | 10.20 | 1.58 | 6949.04 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 8/8/2022 | 8.71 | 10.23 | 1.52 | 6949.01 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 9/5/2022 | 8.02 | 9.44 | 1.42 | 6949.80 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 10/3/2022 | 11.13 | 11.19 | 0.06 | 6948.05 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 11/3/2022 | 11.19 | 11.25 | 0.06 | 6947.99 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-48 | 12/6/2022 | 11.51 | 11.55 | 0.04 | 6947.69 | 6959.24 | 6961.73 | 2.49 | 18.51 | 2.0 | 17.0 |
| MKTF-49 | 12/3/2019 | ND | 17.14 | NA | NA | 6944.00 | NA | 2.76 | 22.14 | 5.0 | 25.0 |
| MKTF-49 | 3/4/2020 | ND | 17.51 | NA | 6926.49 | 6944.00 | 6946.76 | 2.76 | 25.24 | 5.0 | 25.0 |
| MKTF-49 | 6/30/2020 | ND | 17.89 | NA | 6926.11 | 6944.00 | 6946.76 | 2.76 | 25.24 | 5.0 | 25.0 |
| MKTF-49 | 9/15/2020 | ND | 17.57 | NA | 6926.43 | 6944.00 | 6946.76 | 2.76 | 22.20 | 5.0 | 25.0 |
| MKTF-49 | 11/10/2020 | ND | 17.99 | NA | 6926.01 | 6944.00 | 6946.76 | 2.76 | 22.20 | 5.0 | 25.0 |
| MKTF-49 | 12/4/2020 | ND | 18.05 | NA | 6925.95 | 6944.00 | 6946.76 | 2.76 | 22.21 | 5.0 | 25.0 |
| MKTF-49 | 1/28/2021 | ND | 18.29 | NA | 6925.71 | 6944.00 | 6946.76 | 2.76 | 22.22 | 5.0 | 25.0 |
| MKTF-49 | 2/28/2021 | ND | 18.29 | NA | 6925.71 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 3/31/2021 | ND | 18.39 | NA | 6925.61 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 4/26/2021 | ND | 17.35 | NA | 6926.65 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 5/20/2021 | ND | 18.45 | NA | 6925.55 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 6/1/2021 | ND | 18.16 | NA | 6925.84 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 6/16/2021 | 18.54 | 19.29 | 0.75 | 6924.71 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 9/9/2021 | 18.01 | 19.07 | 1.06 | 6924.93 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 12/3/2021 | 17.74 | 18.03 | 0.29 | 6925.97 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 1/10/2022 | 18.34 | 18.82 | 0.48 | 6925.18 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 2/28/2022 | 18.24 | 18.90 | 0.66 | 6925.10 | 6944.00 | 6946.76 | 2.76 | 22.26 | 5.0 | 25.0 |
| MKTF-49 | 3/2/2022 | 17.70 | 17.88 | 0.18 | 6926.12 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 4/27/2022 | 18.79 | 19.05 | 0.26 | 6924.95 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 5/4/2022 | 18.46 | 20.46 | 2.00 | 6923.54 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MKTF-49 | 6/2/2022 | 18.69 | 19.89 | 1.20 | 6924.11 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 7/6/2022 | 18.69 | 20.72 | 2.03 | 6923.28 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 8/8/2022 | 18.53 | 20.10 | 1.57 | 6923.90 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 9/5/2022 | 18.44 | 20.18 | 1.74 | 6923.82 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 10/3/2022 | 18.62 | 19.22 | 0.60 | 6924.78 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 11/3/2022 | 18.64 | 19.28 | 0.64 | 6924.72 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-49 | 12/6/2022 | 18.58 | 19.72 | 1.14 | 6924.28 | 6944.00 | 6946.76 | 2.76 | 22.24 | 5.0 | 25.0 |
| MKTF-50 | 12/3/2019 | ND | 12.47 | NA | NA | 6939.68 | NA | 3.14 | 18.51 | 3.0 | 18.0 |
| MKTF-50 | 3/4/2020 | ND | 12.73 | NA | 6926.95 | 6939.68 | 6942.82 | 3.14 | 22.86 | 3.0 | 18.0 |
| MKTF-50 | 6/30/2020 | ND | 12.86 | NA | 6926.82 | 6939.68 | 6942.82 | 3.14 | 22.86 | 3.0 | 18.0 |
| MKTF-50 | 9/15/2020 | 12.22 | 12.23 | 0.01 | 6927.45 | 6939.68 | 6942.82 | 3.14 | 19.50 | 3.0 | 18.0 |
| MKTF-50 | 11/10/2020 | ND | 12.89 | NA | 6926.79 | 6939.68 | 6942.82 | 3.14 | 19.50 | 3.0 | 18.0 |
| MKTF-50 | 12/4/2020 | ND | 13.03 | NA | 6926.65 | 6939.68 | 6942.82 | 3.14 | 18.49 | 3.0 | 18.0 |
| MKTF-50 | 1/28/2021 | ND | 13.29 | NA | 6926.39 | 6939.68 | 6942.82 | 3.14 | 17.48 | 3.0 | 18.0 |
| MKTF-50 | 2/28/2021 | ND | 13.24 | NA | 6926.44 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 3/31/2021 | ND | 13.34 | NA | 6926.34 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 4/26/2021 | ND | 13.05 | NA | 6926.63 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 5/20/2021 | ND | 13.33 | NA | 6926.35 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 6/1/2021 | ND | 13.52 | NA | 6926.16 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 6/16/2021 | 13.42 | 13.62 | 0.20 | 6926.06 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 9/9/2021 | 12.26 | 12.54 | 0.28 | 6927.14 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 12/9/2021 | 12.30 | 12.56 | 0.26 | 6927.12 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 1/10/2022 | 12.36 | 12.54 | 0.18 | 6927.14 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 2/28/2022 | 12.41 | 12.57 | 0.16 | 6927.11 | 6939.68 | 6942.82 | 3.14 | 18.56 | 3.0 | 18.0 |
| MKTF-50 | 3/2/2022 | 12.27 | 12.57 | 0.30 | 6927.11 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 4/27/2022 | 12.66 | 12.89 | 0.23 | 6926.79 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 5/5/2022 | 12.68 | 12.88 | 0.20 | 6926.80 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 6/2/2022 | 12.87 | 13.18 | 0.31 | 6926.50 | 6939.68 | 6942.82 | 3.14 | 18.61 | 3.0 | 18.0 |
| MKTF-50 | 7/6/2022 | 12.66 | 12.89 | 0.23 | 6926.79 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 8/8/2022 | 12.82 | 13.12 | 0.30 | 6926.56 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 9/5/2022 | 12.76 | 13.05 | 0.29 | 6926.63 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 10/3/2022 | 12.68 | 12.96 | 0.28 | 6926.72 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 11/3/2022 | 12.76 | 13.01 | 0.25 | 6926.67 | 6939.68 | 6942.82 | 3.14 | 18.57 | 3.0 | 18.0 |
| MKTF-50 | 12/6/2022 | NA | 12.89 | NA | 6926.79 | 6939.68 | 6942.82 | 3.14 | 60.16 | 3.0 | 18.0 |
| NAPIS-1 | 3/10/2014 | ND | 6.54 | NA | 6907.08 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 6/5/2014 | ND | 6.62 | NA | 6907.00 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 9/11/2014 | ND | 6.61 | NA | 6907.01 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 11/11/2014 | ND | 6.72 | NA | 6906.90 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 3/10/2015 | ND | 6.66 | NA | 6906.96 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 6/2/2015 | ND | 6.76 | NA | 6906.86 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 8/10/2015 | ND | 6.76 | NA | 6906.86 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 10/28/2015 | ND | 6.96 | NA | 6906.66 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 3/1/2016 | ND | 6.41 | NA | 6907.21 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 6/7/2016 | ND | 6.40 | NA | 6907.22 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 9/1/2016 | ND | 6.75 | NA | 6906.87 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 11/14/2016 | ND | 6.58 | NA | 6907.04 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 2/21/2017 | ND | 6.46 | NA | 6907.16 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 6/2/2017 | ND | 6.61 | NA | 6907.01 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| NAPIS-1 | 9/5/2017 | 6.08 | 6.94 | 0.86 | 6906.68 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 12/4/2017 | 5.96 | 6.61 | 0.65 | 6907.01 | 6913.62 | 6913.86 | 0.24 | 13.51 | 3.7 | 13.7 |
| NAPIS-1 | 2/12/2018 | 5.91 | 7.86 | 1.95 | 6905.76 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 4/25/2018 | 6.34 | 7.58 | 1.24 | 6906.04 | 6913.62 | 6913.86 | 0.24 | 13.52 | 3.7 | 13.7 |
| NAPIS-1 | 8/15/2018 | NA | NA | NA | NA | 6913.62 | 6913.86 | 0.24 | 13.52 | 3.7 | 13.7 |
| NAPIS-1 | 11/8/2018 | NA | NA | NA | NA | 6913.62 | 6913.86 | 0.24 | 13.52 | 3.7 | 13.7 |
| NAPIS-1 | 3/28/2019 | NA | NA | NA | NA | 6913.62 | 6913.86 | 0.24 | 13.52 | 3.7 | 13.7 |
| NAPIS-1 | 5/28/2019 | 7.48 | 7.64 | 0.16 | 6905.98 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 8/22/2019 | 7.21 | 7.29 | 0.08 | 6906.33 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 10/21/2019 | 7.42 | 7.62 | 0.20 | 6906.00 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 3/4/2020 | 7.45 | 7.50 | 0.05 | 6906.12 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 7/1/2020 | 7.14 | 7.18 | 0.04 | 6906.44 | 6913.62 | 6913.86 | 0.24 | 13.29 | 3.7 | 13.7 |
| NAPIS-1 | 9/15/2020 | 6.46 | 6.47 | 0.01 | 6907.15 | 6913.62 | 6913.86 | 0.24 | 13.34 | 3.7 | 13.7 |
| NAPIS-1 | 11/10/2020 | 6.95 | 6.96 | 0.01 | 6906.66 | 6913.62 | 6913.86 | 0.24 | 13.34 | 3.7 | 13.7 |
| NAPIS-1 | 12/7/2020 | ND | 7.20 | NA | 6906.42 | 6913.62 | 6913.86 | 0.24 | 13.52 | 3.7 | 13.7 |
| NAPIS-1 | 1/28/2021 | 7.64 | 7.65 | 0.01 | 6905.97 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 2/27/2021 | 7.66 | 7.71 | 0.05 | 6905.91 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 3/31/2021 | ND | 7.77 | NA | 6905.85 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 4/26/2021 | ND | 7.58 | NA | 6906.04 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 5/20/2021 | ND | 8.28 | NA | 6905.34 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 6/3/2021 | ND | 7.61 | NA | 6906.01 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 9/8/2021 | 6.79 | 6.80 | 0.01 | 6906.82 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 12/3/2021 | 7.02 | 7.04 | 0.02 | 6906.58 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 1/10/2022 | 7.06 | 7.09 | 0.03 | 6906.53 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 2/28/2022 | 7.04 | 7.08 | 0.04 | 6906.54 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 3/1/2022 | 7.07 | 7.09 | 0.02 | 6906.53 | 6913.62 | 6913.86 | 0.24 | 13.71 | 3.7 | 13.7 |
| NAPIS-1 | 4/27/2022 | 7.26 | 7.31 | 0.05 | 6906.31 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 5/5/2022 | 7.27 | 7.34 | 0.07 | 6906.28 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 6/2/2022 | 7.21 | 7.24 | 0.03 | 6906.38 | 6913.62 | 6913.86 | 0.24 | 13.71 | 3.7 | 13.7 |
| NAPIS-1 | 7/7/2022 | 7.01 | 7.03 | 0.02 | 6906.59 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 8/9/2022 | 7.04 | 7.06 | 0.02 | 6906.56 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 9/5/2022 | 7.20 | 7.23 | 0.03 | 6906.39 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 10/5/2022 | 7.26 | 7.30 | 0.04 | 6906.32 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 11/2/2022 | 7.29 | 7.33 | 0.04 | 6906.29 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-1 | 12/6/2022 | 7.39 | 7.44 | 0.05 | 6906.18 | 6913.62 | 6913.86 | 0.24 | 13.70 | 3.7 | 13.7 |
| NAPIS-2 | 3/10/2014 | ND | 8.78 | NA | 6904.62 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 6/5/2014 | ND | 8.95 | NA | 6904.45 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 9/11/2014 | ND | 8.85 | NA | 6904.55 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 11/11/2014 | ND | 8.95 | NA | 6904.45 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 3/10/2015 | ND | 9.19 | NA | 6904.21 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 6/2/2015 | ND | 9.29 | NA | 6904.11 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 8/10/2015 | ND | 9.15 | NA | 6904.25 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 10/28/2015 | ND | 9.07 | NA | 6904.33 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 3/1/2016 | ND | 8.40 | NA | 6905.00 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 6/7/2016 | ND | 7.15 | NA | 6906.25 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 9/1/2016 | ND | 9.59 | NA | 6903.81 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 11/14/2016 | ND | 8.95 | NA | 6904.45 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 2/21/2017 | ND | 8.64 | NA | 6904.76 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| NAPIS-2 | 6/1/2017 | ND | 9.10 | NA | 6904.30 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 9/5/2017 | ND | 9.07 | NA | 6904.33 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 12/4/2017 | ND | 8.73 | NA | 6904.67 | 6913.40 | 6912.65 | -0.75 | 15.35 | 4.2 | 14.2 |
| NAPIS-2 | 2/9/2018 | ND | 9.00 | NA | 6904.40 | 6913.40 | 6912.65 | -0.75 | 15.35 | 4.2 | 14.2 |
| NAPIS-2 | 4/26/2018 | ND | 9.33 | NA | 6904.07 | 6913.40 | 6912.65 | -0.75 | 15.27 | 4.2 | 14.2 |
| NAPIS-2 | 8/15/2018 | NA | NA | NA | NA | 6913.40 | 6912.65 | -0.75 | 15.27 | 4.2 | 14.2 |
| NAPIS-2 | 11/8/2018 | NA | NA | NA | NA | 6913.40 | 6912.65 | -0.75 | 15.27 | 4.2 | 14.2 |
| NAPIS-2 | 3/28/2019 | NA | NA | NA | NA | 6913.40 | 6912.65 | -0.75 | 15.27 | 4.2 | 14.2 |
| NAPIS-2 | 5/28/2019 | ND | 10.29 | NA | 6903.11 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 8/22/2019 | ND | 9.90 | NA | 6903.50 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 10/21/2019 | ND | 10.15 | NA | 6903.25 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 3/3/2020 | ND | 10.21 | NA | 6903.19 | 6913.40 | 6912.65 | -0.75 | 14.36 | 4.2 | 14.2 |
| NAPIS-2 | 7/1/2020 | ND | 9.87 | NA | 6903.53 | 6913.40 | 6912.65 | -0.75 | 31.17 | 4.2 | 14.2 |
| NAPIS-2 | 9/15/2020 | ND | 8.87 | NA | 6904.53 | 6913.40 | 6912.65 | -0.75 | 15.35 | 4.2 | 14.2 |
| NAPIS-2 | 11/10/2020 | ND | 9.26 | NA | 6904.14 | 6913.40 | 6912.65 | -0.75 | 15.35 | 4.2 | 14.2 |
| NAPIS-2 | 12/7/2020 | ND | 9.47 | NA | 6903.93 | 6913.40 | 6912.65 | -0.75 | 15.36 | 4.2 | 14.2 |
| NAPIS-2 | 1/28/2021 | ND | 9.91 | NA | 6903.49 | 6913.40 | 6912.65 | -0.75 | 15.37 | 4.2 | 14.2 |
| NAPIS-2 | 2/28/2021 | ND | 9.90 | NA | 6903.50 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-2 | 3/31/2021 | ND | 10.07 | NA | 6903.33 | 6913.40 | 6912.65 | -0.75 | 15.43 | 4.2 | 14.2 |
| NAPIS-2 | 4/26/2021 | ND | 9.89 | NA | 6903.51 | 6913.40 | 6912.65 | -0.75 | 15.46 | 4.2 | 14.2 |
| NAPIS-2 | 5/20/2021 | ND | 9.71 | NA | 6903.69 | 6913.40 | 6912.65 | -0.75 | 15.49 | 4.2 | 14.2 |
| NAPIS-2 | 6/1/2021 | ND | 9.85 | NA | 6903.55 | 6913.40 | 6912.65 | -0.75 | 15.49 | 4.2 | 14.2 |
| NAPIS-2 | 9/8/2021 | ND | 9.03 | NA | 6904.37 | 6913.40 | 6912.65 | -0.75 | 15.49 | 4.2 | 14.2 |
| NAPIS-2 | 12/13/2021 | ND | 9.19 | NA | 6904.21 | 6913.40 | 6912.65 | -0.75 | 15.49 | 4.2 | 14.2 |
| NAPIS-2 | 1/10/2022 | ND | 9.30 | NA | 6904.10 | 6913.40 | 6912.65 | -0.75 | 15.14 | 4.2 | 14.2 |
| NAPIS-2 | 2/28/2022 | ND | 9.29 | NA | 6904.11 | 6913.40 | 6912.65 | -0.75 | 15.14 | 4.2 | 14.2 |
| NAPIS-2 | 3/1/2022 | ND | 9.15 | NA | 6904.25 | 6913.40 | 6912.65 | -0.75 | 15.15 | 4.2 | 14.2 |
| NAPIS-2 | 4/27/2022 | ND | 9.81 | NA | 6903.59 | 6913.40 | 6912.65 | -0.75 | 15.15 | 4.2 | 14.2 |
| NAPIS-2 | 5/5/2022 | ND | 10.00 | NA | 6903.40 | 6913.40 | 6912.65 | -0.75 | 15.15 | 4.2 | 14.2 |
| NAPIS-2 | 6/2/2022 | ND | 10.80 | NA | 6902.60 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-2 | 7/7/2022 | ND | 10.85 | NA | 6902.55 | 6913.40 | 6912.65 | -0.75 | 15.65 | 4.2 | 14.2 |
| NAPIS-2 | 8/9/2022 | ND | 10.98 | NA | 6902.42 | 6913.40 | 6912.65 | -0.75 | 15.90 | 4.2 | 14.2 |
| NAPIS-2 | 9/2/2022 | ND | 10.60 | NA | 6902.80 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-2 | 10/5/2022 | ND | 10.65 | NA | 6902.75 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-2 | 11/2/2022 | ND | 10.68 | NA | 6902.72 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-2 | 12/14/2022 | ND | 10.68 | NA | 6902.72 | 6913.40 | 6912.65 | -0.75 | 15.40 | 4.2 | 14.2 |
| NAPIS-3 | 3/10/2014 | ND | 9.52 | NA | 6903.86 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 6/5/2014 | ND | 9.47 | NA | 6903.91 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 9/11/2014 | ND | 8.59 | NA | 6904.79 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 11/13/2014 | ND | 9.80 | NA | 6903.58 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 3/10/2015 | ND | 10.21 | NA | 6903.17 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 6/2/2015 | ND | 9.72 | NA | 6903.66 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 8/10/2015 | ND | 9.11 | NA | 6904.27 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 10/28/2015 | ND | 9.84 | NA | 6903.54 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 3/1/2016 | ND | 9.17 | NA | 6904.21 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 6/7/2016 | ND | 8.34 | NA | 6905.04 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 9/1/2016 | ND | 9.72 | NA | 6903.66 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 11/14/2016 | ND | 9.73 | NA | 6903.65 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| NAPIS-3 | 2/21/2017 | ND | 9.82 | NA | 6903.56 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 6/1/2017 | ND | 10.82 | NA | 6902.56 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 9/8/2017 | ND | 9.72 | NA | 6903.66 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 12/14/2017 | ND | 9.62 | NA | 6903.76 | 6913.38 | 6912.76 | -0.62 | 32.20 | 25.4 | 30.4 |
| NAPIS-3 | 2/9/2018 | ND | 10.32 | NA | 6903.06 | 6913.38 | 6912.76 | -0.62 | 32.22 | 25.4 | 30.4 |
| NAPIS-3 | 4/26/2018 | ND | 10.22 | NA | 6903.16 | 6913.38 | 6912.76 | -0.62 | 32.13 | 25.4 | 30.4 |
| NAPIS-3 | 8/15/2018 | NA | NA | NA | NA | 6913.38 | 6912.76 | -0.62 | 32.13 | 25.4 | 30.4 |
| NAPIS-3 | 11/8/2018 | NA | NA | NA | NA | 6913.38 | 6912.76 | -0.62 | 32.13 | 25.4 | 30.4 |
| NAPIS-3 | 3/28/2019 | NA | NA | NA | NA | 6913.38 | 6912.76 | -0.62 | 32.13 | 25.4 | 30.4 |
| NAPIS-3 | 5/28/2019 | ND | 11.19 | NA | 6902.19 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 8/22/2019 | ND | 10.80 | NA | 6902.58 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 10/21/2019 | ND | 10.64 | NA | 6902.74 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 3/3/2020 | ND | 11.24 | NA | 6902.14 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 7/1/2020 | ND | 10.72 | NA | 6902.66 | 6913.38 | 6912.76 | -0.62 | 31.04 | 25.4 | 30.4 |
| NAPIS-3 | 9/15/2020 | ND | 9.87 | NA | 6903.51 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 11/10/2020 | ND | 10.09 | NA | 6903.29 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 12/7/2020 | ND | 9.13 | NA | 6904.25 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 1/28/2021 | ND | 9.62 | NA | 6903.76 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 2/28/2021 | ND | 9.71 | NA | 6903.67 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 3/31/2021 | ND | 9.89 | NA | 6903.49 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 4/26/2021 | ND | 9.51 | NA | 6903.87 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 5/20/2021 | ND | 9.92 | NA | 6903.46 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 6/3/2021 | ND | 9.93 | NA | 6903.45 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 9/8/2021 | ND | 8.77 | NA | 6904.61 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 12/13/2021 | ND | 8.85 | NA | 6904.53 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 1/10/2022 | ND | 8.92 | NA | 6904.46 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 2/28/2022 | ND | 8.62 | NA | 6904.76 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 3/1/2022 | ND | 8.80 | NA | 6904.58 | 6913.38 | 6912.76 | -0.62 | 24.92 | 25.4 | 30.4 |
| NAPIS-3 | 4/27/2022 | ND | 8.97 | NA | 6904.41 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 5/5/2022 | ND | 9.04 | NA | 6904.34 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 6/2/2022 | ND | 10.63 | NA | 6902.75 | 6913.38 | 6912.76 | -0.62 | 24.94 | 25.4 | 30.4 |
| NAPIS-3 | 7/7/2022 | ND | 10.65 | NA | 6902.73 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 8/9/2022 | ND | 10.60 | NA | 6902.78 | 6913.38 | 6912.76 | -0.62 | 32.12 | 25.4 | 30.4 |
| NAPIS-3 | 9/2/2022 | ND | 10.37 | NA | 6903.01 | 6913.38 | 6912.76 | -0.62 | 24.92 | 25.4 | 30.4 |
| NAPIS-3 | 10/5/2022 | ND | 10.34 | NA | 6903.04 | 6913.38 | 6912.76 | -0.62 | 24.92 | 25.4 | 30.4 |
| NAPIS-3 | 11/2/2022 | ND | 10.42 | NA | 6902.96 | 6913.38 | 6912.76 | -0.62 | 24.92 | 25.4 | 30.4 |
| NAPIS-3 | 12/14/2022 | ND | 10.55 | NA | 6902.83 | 6913.38 | 6912.76 | -0.62 | 24.92 | 25.4 | 30.4 |
| OAPIS-1 | 3/10/2014 | ND | 9.14 | NA | 6905.23 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 6/5/2014 | ND | 9.39 | NA | 6904.98 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 9/12/2014 | ND | 8.75 | NA | 6905.62 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 11/11/2014 | ND | 14.85 | NA | 6899.52 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 3/10/2015 | ND | 9.48 | NA | 6904.89 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 6/2/2015 | ND | 9.65 | NA | 6904.72 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 8/10/2015 | ND | 8.97 | NA | 6905.40 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 10/29/2015 | ND | 8.66 | NA | 6905.71 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 3/1/2016 | ND | 9.50 | NA | 6904.87 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 6/7/2016 | ND | 9.14 | NA | 6905.23 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 9/1/2016 | ND | 8.96 | NA | 6905.41 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OAPIS-1 | 11/14/2016 | ND | 9.08 | NA | 6905.29 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 2/21/2017 | ND | 9.24 | NA | 6905.13 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 6/1/2017 | ND | 9.10 | NA | 6905.27 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 9/5/2017 | ND | 8.73 | NA | 6905.64 | 6914.37 | 6916.73 | 2.36 | 25.94 | 16.0 | 26.0 |
| OAPIS-1 | 12/4/2017 | ND | 9.52 | NA | 6904.85 | 6914.37 | 6916.73 | 2.36 | 25.42 | 16.0 | 26.0 |
| OAPIS-1 | 2/9/2018 | ND | 10.24 | NA | 6904.13 | 6914.37 | 6916.73 | 2.36 | 25.42 | 16.0 | 26.0 |
| OAPIS-1 | 4/26/2018 | ND | 10.06 | NA | 6904.31 | 6914.37 | 6916.73 | 2.36 | 25.39 | 16.0 | 26.0 |
| OAPIS-1 | 8/15/2018 | ND | 9.24 | NA | 6905.13 | 6914.37 | 6916.73 | 2.36 | 25.50 | 16.0 | 26.0 |
| OAPIS-1 | 11/19/2018 | ND | 9.53 | NA | 6904.84 | 6914.37 | 6916.73 | 2.36 | 25.42 | 16.0 | 26.0 |
| OAPIS-1 | 3/28/2019 | ND | 9.07 | NA | 6905.30 | 6914.37 | 6916.73 | 2.36 | 23.64 | 16.0 | 26.0 |
| OAPIS-1 | 5/8/2019 | ND | 9.73 | NA | 6904.64 | 6914.37 | 6916.73 | 2.36 | 23.64 | 16.0 | 26.0 |
| OAPIS-1 | 8/22/2019 | ND | 8.73 | NA | 6905.64 | 6914.37 | 6916.73 | 2.36 | 25.50 | 16.0 | 26.0 |
| OAPIS-1 | 10/21/2019 | ND | 9.08 | NA | 6905.29 | 6914.37 | 6916.73 | 2.36 | 25.42 | 16.0 | 26.0 |
| OAPIS-1 | 3/3/2020 | ND | 10.20 | NA | 6904.17 | 6914.37 | 6916.73 | 2.36 | 23.64 | 16.0 | 26.0 |
| OAPIS-1 | 7/1/2020 | ND | 10.24 | NA | 6904.13 | 6914.37 | 6916.73 | 2.36 | 23.64 | 16.0 | 26.0 |
| OAPIS-1 | 9/15/2020 | ND | 9.54 | NA | 6904.83 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 11/10/2020 | ND | 9.66 | NA | 6904.71 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 12/7/2020 | ND | 9.95 | NA | 6904.42 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 1/28/2021 | ND | 10.62 | NA | 6903.75 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 2/28/2021 | ND | 10.60 | NA | 6903.77 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 3/31/2021 | ND | 11.12 | NA | 6903.25 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 4/26/2021 | ND | 10.88 | NA | 6903.49 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 5/20/2021 | ND | 11.52 | NA | 6902.85 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 6/3/2021 | ND | 10.72 | NA | 6903.65 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 9/8/2021 | ND | 9.34 | NA | 6905.03 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 12/13/2021 | ND | 9.85 | NA | 6904.52 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 1/10/2022 | ND | 9.84 | NA | 6904.53 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 2/28/2022 | ND | 9.80 | NA | 6904.57 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 3/1/2022 | ND | 9.83 | NA | 6904.54 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 4/27/2022 | ND | 9.86 | NA | 6904.51 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 5/5/2022 | ND | 10.05 | NA | 6904.32 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 6/2/2022 | ND | 10.42 | NA | 6903.95 | 6914.37 | 6916.73 | 2.36 | 25.60 | 16.0 | 26.0 |
| OAPIS-1 | 7/7/2022 | ND | 10.80 | NA | 6903.57 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 8/9/2022 | ND | 10.84 | NA | 6903.53 | 6914.37 | 6916.73 | 2.36 | 25.64 | 16.0 | 26.0 |
| OAPIS-1 | 9/2/2022 | ND | 10.04 | NA | 6904.33 | 6914.37 | 6916.73 | 2.36 | 25.59 | 16.0 | 26.0 |
| OAPIS-1 | 10/5/2022 | ND | 10.00 | NA | 6904.37 | 6914.37 | 6916.73 | 2.36 | 25.59 | 16.0 | 26.0 |
| OAPIS-1 | 11/3/2022 | ND | 10.13 | NA | 6904.24 | 6914.37 | 6916.73 | 2.36 | 25.59 | 16.0 | 26.0 |
| OAPIS-1 | 12/11/2022 | ND | 9.99 | NA | 6904.38 | 6914.37 | 6916.73 | 2.36 | 25.59 | 16.0 | 26.0 |
| OAPIS-1 | 12/15/2022 | ND | 10.16 | NA | 6904.21 | 6914.37 | 6916.73 | 2.36 | 25.59 | 16.0 | 26.0 |
| OW-12A | 9/8/2021 | ND | Dry | NA | Dry | 6943.65 | 6943.06 | -0.59 | 36.09 | 13.0 | 32.7 |
| OW-12A | 12/3/2021 | ND | 26.14 | NA | 6917.51 | 6943.65 | 6943.06 | -0.59 | 36.09 | 13.0 | 32.7 |
| OW-12A | 3/2/2022 | ND | 26.25 | NA | 6917.40 | 6943.65 | 6943.06 | -0.59 | 34.09 | 13.0 | 32.7 |
| OW-12A | 6/1/2022 | ND | 26.79 | NA | 6916.86 | 6943.65 | 6943.06 | -0.59 | 33.79 | 13.0 | 32.7 |
| OW-12A | 9/2/2022 | ND | 26.61 | NA | 6917.04 | 6943.65 | 6943.06 | -0.59 | 33.79 | 13.0 | 32.7 |
| OW-12A | 10/4/2022 | ND | 26.59 | NA | 6917.06 | 6943.65 | 6943.06 | -0.59 | 33.79 | 13.0 | 32.7 |
| OW-12A | 11/3/2022 | ND | 26.65 | NA | 6917.00 | 6943.65 | 6943.06 | -0.59 | 33.79 | 13.0 | 32.7 |
| OW-12A | 12/7/2022 | ND | 26.64 | NA | 6917.01 | 6943.65 | 6943.06 | -0.59 | 33.79 | 13.0 | 32.7 |
| OW-14 | 3/7/2014 | ND | 22.02 | NA | 6902.53 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-14 | 6/3/2014 | ND | 22.05 | NA | 6902.50 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 9/15/2014 | ND | 22.30 | NA | 6902.25 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 11/10/2014 | ND | 22.15 | NA | 6902.40 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 3/9/2015 | ND | 21.85 | NA | 6902.70 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 6/1/2015 | ND | 21.78 | NA | 6902.77 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 8/10/2015 | ND | 21.86 | NA | 6902.69 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 10/27/2015 | ND | 21.59 | NA | 6902.96 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 3/4/2016 | ND | 21.10 | NA | 6903.45 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 6/6/2016 | ND | 21.08 | NA | 6903.47 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 8/31/2016 | ND | 21.40 | NA | 6903.15 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 11/15/2016 | ND | 21.18 | NA | 6903.37 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 2/27/2017 | ND | 20.73 | NA | 6903.82 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 5/30/2017 | ND | 21.08 | NA | 6903.47 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 9/6/2017 | ND | 20.46 | NA | 6904.09 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 12/11/2017 | ND | 20.10 | NA | 6904.45 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 2/27/2018 | ND | 19.70 | NA | 6904.85 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 4/26/2018 | ND | 19.65 | NA | 6904.90 | 6924.55 | 6926.65 | 2.10 | 44.65 | 35.0 | 45.0 |
| OW-14 | 8/14/2018 | ND | 19.85 | NA | 6904.70 | 6924.55 | 6926.65 | 2.10 | 44.68 | 35.0 | 45.0 |
| OW-14 | 11/6/2018 | ND | 19.72 | NA | 6904.83 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 2/5/2019 | ND | 19.54 | NA | 6905.01 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 5/1/2019 | ND | 19.35 | NA | 6905.20 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 8/12/2019 | NA | NA | NA | NA | 6924.55 | 6926.65 | 2.10 | 44.68 | 35.0 | 45.0 |
| OW-14 | 11/1/2019 | NA | NA | NA | NA | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 3/2/2020 | NA | NA | NA | NA | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 6/30/2020 | ND | 20.65 | NA | 6903.90 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 9/14/2020 | NA | NA | NA | NA | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 12/7/2020 | NA | 22.30 | NA | 6902.25 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 2/27/2021 | ND | 21.22 | NA | 6903.33 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 6/2/2021 | ND | 21.55 | NA | 6903.00 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 9/23/2021 | ND | 21.63 | NA | 6902.92 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 12/29/2021 | ND | 20.70 | NA | 6903.85 | 6924.55 | 6926.65 | 2.10 | 44.42 | 35.0 | 45.0 |
| OW-14 | 3/1/2022 | ND | 20.66 | NA | 6903.89 | 6924.55 | 6926.65 | 2.10 | 46.31 | 35.0 | 45.0 |
| OW-14 | 6/2/2022 | ND | 22.19 | NA | 6902.36 | 6924.55 | 6926.65 | 2.10 | 45.20 | 35.0 | 45.0 |
| OW-14 | 9/5/2022 | ND | 22.65 | NA | 6901.90 | 6924.55 | 6926.65 | 2.10 | 45.20 | 35.0 | 45.0 |
| OW-14 | 10/4/2022 | ND | 22.62 | NA | 6901.93 | 6924.55 | 6926.65 | 2.10 | 45.20 | 35.0 | 45.0 |
| OW-14 | 11/3/2022 | ND | 22.85 | NA | 6901.70 | 6924.55 | 6926.65 | 2.10 | 45.20 | 35.0 | 45.0 |
| OW-14 | 12/6/2022 | ND | 23.00 | NA | 6901.55 | 6924.55 | 6926.65 | 2.10 | 45.20 | 35.0 | 45.0 |
| OW-29 | 3/7/2014 | ND | 15.74 | NA | 6898.15 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 6/2/2014 | ND | 15.84 | NA | 6898.05 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 9/15/2014 | ND | 16.24 | NA | 6897.65 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 11/11/2014 | ND | 16.05 | NA | 6897.84 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 3/9/2015 | ND | 15.56 | NA | 6898.33 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 6/1/2015 | ND | 15.56 | NA | 6898.33 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 8/10/2015 | ND | 15.83 | NA | 6898.06 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 10/27/2015 | ND | 15.61 | NA | 6898.28 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 3/4/2016 | ND | 15.04 | NA | 6898.85 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 6/6/2016 | ND | 15.05 | NA | 6898.84 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 8/31/2016 | ND | 15.49 | NA | 6898.40 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-29 | 11/15/2016 | ND | 15.12 | NA | 6898.77 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 2/27/2017 | ND | 14.71 | NA | 6899.18 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 5/30/2017 | ND | 15.05 | NA | 6898.84 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 9/6/2017 | ND | 14.94 | NA | 6898.95 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 12/11/2017 | ND | 14.39 | NA | 6899.50 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 2/27/2018 | ND | 14.01 | NA | 6899.88 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 4/26/2018 | ND | 13.87 | NA | 6900.02 | 6913.89 | 6917.00 | 3.11 | 48.79 | 37.5 | 47.5 |
| OW-29 | 8/14/2018 | ND | 14.41 | NA | 6899.48 | 6913.89 | 6917.00 | 3.11 | 49.29 | 37.5 | 47.5 |
| OW-29 | 11/6/2018 | ND | 14.11 | NA | 6899.78 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 2/5/2019 | ND | 13.81 | NA | 6900.08 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 5/1/2019 | ND | 13.60 | NA | 6900.29 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 8/12/2019 | ND | 14.05 | NA | 6899.84 | 6913.89 | 6917.00 | 3.11 | 49.29 | 37.5 | 47.5 |
| OW-29 | 10/14/2019 | ND | 14.13 | NA | 6899.76 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 2/24/2020 | ND | 13.37 | NA | 6900.52 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 6/30/2020 | ND | 14.31 | NA | 6899.58 | 6913.89 | 6917.00 | 3.11 | 47.97 | 37.5 | 47.5 |
| OW-29 | 9/14/2020 | ND | 14.46 | NA | 6899.43 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 11/9/2020 | ND | 14.12 | NA | 6899.77 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 12/7/2020 | ND | 14.04 | NA | 6899.85 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 2/27/2021 | ND | 13.73 | NA | 6900.16 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 6/2/2021 | ND | 14.17 | NA | 6899.72 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 9/23/2021 | ND | 14.92 | NA | 6898.97 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 12/1/2021 | ND | 14.54 | NA | 6899.35 | 6913.89 | 6917.00 | 3.11 | 47.94 | 37.5 | 47.5 |
| OW-29 | 3/1/2022 | ND | 14.34 | NA | 6899.55 | 6913.89 | 6917.00 | 3.11 | 48.35 | 37.5 | 47.5 |
| OW-29 | 6/1/2022 | ND | 15.54 | NA | 6898.35 | 6913.89 | 6917.00 | 3.11 | 48.35 | 37.5 | 47.5 |
| OW-29 | 9/7/2022 | ND | 15.44 | NA | 6898.45 | 6913.89 | 6917.00 | 3.11 | 48.34 | 37.5 | 47.5 |
| OW-29 | 10/4/2022 | ND | 15.52 | NA | 6898.37 | 6913.89 | 6917.00 | 3.11 | 48.34 | 37.5 | 47.5 |
| OW-29 | 11/3/2022 | ND | 15.59 | NA | 6898.30 | 6913.89 | 6917.00 | 3.11 | 48.34 | 37.5 | 47.5 |
| OW-29 | 12/6/2022 | ND | 15.71 | NA | 6898.18 | 6913.89 | 6917.00 | 3.11 | 48.34 | 37.5 | 47.5 |
| OW-29 | 12/11/2022 | ND | 15.47 | NA | 6898.42 | 6913.89 | 6917.00 | 3.11 | 48.34 | 37.5 | 47.5 |
| OW-30 | 3/7/2014 | ND | 20.54 | NA | 6901.27 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/3/2014 | ND | 20.63 | NA | 6901.18 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 9/17/2014 | ND | 20.96 | NA | 6900.85 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 11/11/2014 | ND | 20.82 | NA | 6900.99 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 3/9/2015 | ND | 20.37 | NA | 6901.44 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/1/2015 | ND | 20.32 | NA | 6901.49 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 8/10/2015 | ND | 20.54 | NA | 6901.27 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 10/27/2015 | ND | 20.26 | NA | 6901.55 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 3/8/2016 | ND | 19.67 | NA | 6902.14 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/6/2016 | ND | 19.76 | NA | 6902.05 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 8/31/2016 | ND | 20.42 | NA | 6901.39 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 11/14/2016 | ND | 19.87 | NA | 6901.94 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 2/27/2017 | ND | 19.36 | NA | 6902.45 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 5/31/2017 | ND | 19.76 | NA | 6902.05 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 9/6/2017 | ND | 19.40 | NA | 6902.41 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 12/12/2017 | ND | 18.87 | NA | 6902.94 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 2/28/2018 | ND | 18.45 | NA | 6903.36 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 4/26/2018 | ND | 18.40 | NA | 6903.41 | 6921.81 | 6924.69 | 2.88 | 47.32 | 37.9 | 47.9 |
| OW-30 | 8/15/2018 | ND | 18.82 | NA | 6902.99 | 6921.81 | 6924.69 | 2.88 | 48.52 | 37.9 | 47.9 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-30 | 12/3/2018 | ND | 18.42 | NA | 6903.39 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 3/27/2019 | ND | 18.25 | NA | 6903.56 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/5/2019 | ND | 18.26 | NA | 6903.55 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 8/12/2019 | NA | NA | NA | NA | 6921.81 | 6924.69 | 2.88 | 48.52 | 37.9 | 47.9 |
| OW-30 | 11/1/2019 | ND | NA | NA | NA | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 3/2/2020 | NA | NA | NA | NA | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/30/2020 | ND | 19.45 | NA | 6902.36 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 9/15/2020 | ND | NA | NA | NA | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 12/7/2020 | ND | 19.34 | NA | 6902.47 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 2/27/2021 | ND | 19.14 | NA | 6902.67 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 6/2/2021 | ND | 19.54 | NA | 6902.27 | 6921.81 | 6924.69 | 2.88 | 47.02 | 37.9 | 47.9 |
| OW-30 | 9/23/2021 | ND | 19.42 | NA | 6902.39 | 6921.81 | 6924.69 | 2.88 | 47.33 | 37.9 | 47.9 |
| OW-30 | 12/28/2021 | ND | 19.12 | NA | 6902.69 | 6921.81 | 6924.69 | 2.88 | 47.33 | 37.9 | 47.9 |
| OW-30 | 3/1/2022 | ND | 19.07 | NA | 6902.74 | 6921.81 | 6924.69 | 2.88 | 53.17 | 37.9 | 47.9 |
| OW-30 | 6/2/2022 | ND | 19.93 | NA | 6901.88 | 6921.81 | 6924.69 | 2.88 | 47.15 | 37.9 | 47.9 |
| OW-30 | 9/5/2022 | ND | 19.62 | NA | 6902.19 | 6921.81 | 6924.69 | 2.88 | 47.15 | 37.9 | 47.9 |
| OW-30 | 10/4/2022 | ND | 19.65 | NA | 6902.16 | 6921.81 | 6924.69 | 2.88 | 47.15 | 37.9 | 47.9 |
| OW-30 | 11/3/2022 | ND | 19.35 | NA | 6902.46 | 6921.81 | 6924.69 | 2.88 | 47.15 | 37.9 | 47.9 |
| OW-30 | 12/6/2022 | ND | 19.77 | NA | 6902.04 | 6921.81 | 6924.69 | 2.88 | 47.17 | 37.9 | 47.9 |
| OW-50 | 9/15/2014 | ND | 15.28 | NA | 6897.35 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 8/10/2015 | ND | 14.89 | NA | 6897.74 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 9/9/2016 | ND | 14.61 | NA | 6898.02 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 9/11/2017 | ND | 14.02 | NA | 6898.61 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 8/14/2018 | ND | 13.54 | NA | 6899.09 | 6912.63 | 6914.21 | 1.58 | 63.67 | 48.0 | 63.0 |
| OW-50 | 11/7/2018 | ND | 13.62 | NA | 6899.01 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 3/27/2019 | ND | 12.82 | NA | 6899.81 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 5/1/2019 | ND | 12.81 | NA | 6899.82 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 8/16/2019 | ND | 13.16 | NA | 6899.47 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 10/15/2019 | ND | 13.34 | NA | 6899.29 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 3/2/2020 | ND | 12.47 | NA | 6900.16 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 6/30/2020 | ND | 13.03 | NA | 6899.60 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 9/14/2020 | ND | 13.53 | NA | 6899.10 | 6912.63 | 6914.21 | 1.58 | 37.44 | 48.0 | 63.0 |
| OW-50 | 11/9/2020 | ND | 13.29 | NA | 6899.34 | 6912.63 | 6914.21 | 1.58 | 37.44 | 48.0 | 63.0 |
| OW-50 | 12/7/2020 | ND | 13.14 | NA | 6899.49 | 6912.63 | 6914.21 | 1.58 | 37.44 | 48.0 | 63.0 |
| OW-50 | 2/27/2021 | ND | 12.74 | NA | 6899.89 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 6/2/2021 | ND | 13.13 | NA | 6899.50 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 9/23/2021 | ND | 13.87 | NA | 6898.76 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 12/1/2021 | ND | 13.50 | NA | 6899.13 | 6912.63 | 6914.21 | 1.58 | 62.42 | 48.0 | 63.0 |
| OW-50 | 3/2/2022 | ND | 13.32 | NA | 6899.31 | 6912.63 | 6914.21 | 1.58 | 61.81 | 48.0 | 63.0 |
| OW-50 | 6/1/2022 | ND | 13.62 | NA | 6899.01 | 6912.63 | 6914.21 | 1.58 | 61.72 | 48.0 | 63.0 |
| OW-50 | 9/2/2022 | ND | 14.37 | NA | 6898.26 | 6912.63 | 6914.21 | 1.58 | 61.72 | 48.0 | 63.0 |
| OW-50 | 10/4/2022 | ND | 14.31 | NA | 6898.32 | 6912.63 | 6914.21 | 1.58 | 61.72 | 48.0 | 63.0 |
| OW-50 | 11/3/2022 | ND | 14.59 | NA | 6898.04 | 6912.63 | 6914.21 | 1.58 | 61.72 | 48.0 | 63.0 |
| OW-50 | 12/6/2022 | ND | 14.44 | NA | 6898.19 | 6912.63 | 6914.21 | 1.58 | 61.72 | 48.0 | 63.0 |
| OW-52 | 9/15/2014 | ND | 14.65 | NA | 6891.88 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 8/10/2015 | ND | 14.34 | NA | 6892.19 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 9/9/2016 | ND | 14.13 | NA | 6892.40 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 9/11/2017 | ND | 13.70 | NA | 6892.83 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-52 | 8/15/2018 | ND | 13.37 | NA | 6893.16 | 6906.53 | 6907.68 | 1.15 | 77.85 | 64.0 | 79.0 |
| OW-52 | 11/7/2018 | ND | 13.29 | NA | 6893.24 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 3/27/2019 | ND | 12.82 | NA | 6893.71 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 5/1/2019 | ND | 12.59 | NA | 6893.94 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 8/16/2019 | ND | 13.06 | NA | 6893.47 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 10/15/2019 | ND | 13.25 | NA | 6893.28 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 3/2/2020 | ND | 12.56 | NA | 6893.97 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 6/30/2020 | ND | 13.05 | NA | 6893.48 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 9/14/2020 | ND | 13.41 | NA | 6893.12 | 6906.53 | 6907.68 | 1.15 | 39.28 | 64.0 | 79.0 |
| OW-52 | 10/9/2020 | ND | 13.37 | NA | 6893.16 | 6906.53 | 6907.68 | 1.15 | 39.28 | 64.0 | 79.0 |
| OW-52 | 12/7/2020 | ND | 13.27 | NA | 6893.26 | 6906.53 | 6907.68 | 1.15 | 39.28 | 64.0 | 79.0 |
| OW-52 | 2/27/2021 | ND | 12.93 | NA | 6893.60 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 6/2/2021 | ND | 12.99 | NA | 6893.54 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 9/23/2021 | ND | 13.67 | NA | 6892.86 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 12/7/2021 | ND | 13.41 | NA | 6893.12 | 6906.53 | 6907.68 | 1.15 | 76.59 | 64.0 | 79.0 |
| OW-52 | 3/2/2022 | ND | 13.20 | NA | 6893.33 | 6906.53 | 6907.68 | 1.15 | 74.40 | 64.0 | 79.0 |
| OW-52 | 6/1/2022 | ND | 13.35 | NA | 6893.18 | 6906.53 | 6907.68 | 1.15 | 55.35 | 64.0 | 79.0 |
| OW-52 | 9/6/2022 | ND | 13.92 | NA | 6892.61 | 6906.53 | 6907.68 | 1.15 | 55.35 | 64.0 | 79.0 |
| OW-52 | 10/4/2022 | ND | 13.95 | NA | 6892.58 | 6906.53 | 6907.68 | 1.15 | 55.35 | 64.0 | 79.0 |
| OW-52 | 11/3/2022 | ND | 14.35 | NA | 6892.18 | 6906.53 | 6907.68 | 1.15 | 55.35 | 64.0 | 79.0 |
| OW-52 | 12/6/2022 | ND | 14.00 | NA | 6892.53 | 6906.53 | 6907.68 | 1.15 | 55.35 | 64.0 | 79.0 |
| OW-53 | 3/29/2017 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 6/21/2017 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 9/11/2017 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 12/5/2017 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 2/21/2018 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 4/26/2018 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 8/15/2018 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.46 | 16.0 | 31.0 |
| OW-53 | 11/6/2018 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.45 | 31.45 | 16.0 | 31.0 |
| OW-53 | 2/6/2019 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 5/2/2019 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 8/21/2019 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 10/15/2019 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 3/2/2020 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.28 | 16.0 | 31.0 |
| OW-53 | 6/30/2020 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.23 | 16.0 | 31.0 |
| OW-53 | 9/14/2020 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 11/9/2020 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 12/7/2020 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 2/27/2021 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 6/2/2021 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 9/23/2021 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 12/1/2021 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 3/2/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 6/1/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 9/2/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 10/4/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 11/3/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |
| OW-53 | 12/6/2022 | ND | Dry | NA | Dry | 6911.93 | 6914.38 | 2.67 | 31.24 | 16.0 | 31.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-54 | 3/29/2017 | ND | 15.88 | NA | 6900.48 | 6916.36 | 6918.92 | 2.56 | 28.48 | 13.0 | 28.0 |
| OW-54 | 6/21/2017 | ND | 16.07 | NA | 6900.29 | 6916.36 | 6918.92 | 2.56 | 28.48 | 13.0 | 28.0 |
| OW-54 | 9/11/2017 | ND | 16.14 | NA | 6900.22 | 6916.36 | 6918.92 | 2.56 | 28.48 | 13.0 | 28.0 |
| OW-54 | 12/5/2017 | ND | 15.71 | NA | 6900.65 | 6916.36 | 6918.92 | 2.56 | 28.50 | 13.0 | 28.0 |
| OW-54 | 2/21/2018 | ND | 15.49 | NA | 6900.87 | 6916.36 | 6918.92 | 2.56 | 28.31 | 13.0 | 28.0 |
| OW-54 | 4/26/2018 | ND | 15.27 | NA | 6901.09 | 6916.36 | 6918.92 | 2.56 | 27.14 | 13.0 | 28.0 |
| OW-54 | 8/14/2018 | ND | 15.67 | NA | 6900.69 | 6916.36 | 6918.92 | 2.56 | 27.06 | 13.0 | 28.0 |
| OW-54 | 11/6/2018 | ND | 15.34 | NA | 6901.02 | 6916.36 | 6918.92 | 2.56 | 28.50 | 13.0 | 28.0 |
| OW-54 | 2/6/2019 | ND | 14.93 | NA | 6901.34 | 6916.36 | 6918.92 | 2.65 | 28.39 | 13.0 | 28.0 |
| OW-54 | 5/2/2019 | ND | 14.87 | NA | 6901.40 | 6916.36 | 6918.92 | 2.65 | 28.39 | 13.0 | 28.0 |
| OW-54 | 8/21/2019 | ND | 15.35 | NA | 6900.92 | 6916.36 | 6918.92 | 2.65 | 26.97 | 13.0 | 28.0 |
| OW-54 | 10/15/2019 | ND | 15.44 | NA | 6900.83 | 6916.36 | 6918.92 | 2.65 | 28.41 | 13.0 | 28.0 |
| OW-54 | 3/2/2020 | ND | 14.53 | NA | 6901.74 | 6916.36 | 6918.92 | 2.65 | 28.39 | 13.0 | 28.0 |
| OW-54 | 6/30/2020 | ND | 15.10 | NA | 6901.17 | 6916.36 | 6918.92 | 2.65 | 28.39 | 13.0 | 28.0 |
| OW-54 | 9/14/2020 | ND | 15.52 | NA | 6900.75 | 6916.36 | 6918.92 | 2.65 | 21.93 | 13.0 | 28.0 |
| OW-54 | 10/9/2020 | ND | 15.27 | NA | 6901.00 | 6916.36 | 6918.92 | 2.65 | 21.93 | 13.0 | 28.0 |
| OW-54 | 12/7/2020 | ND | 15.13 | NA | 6901.14 | 6916.36 | 6918.92 | 2.65 | 21.93 | 13.0 | 28.0 |
| OW-54 | 2/27/2021 | ND | 14.85 | NA | 6901.42 | 6916.36 | 6918.92 | 2.65 | 28.41 | 13.0 | 28.0 |
| OW-54 | 6/2/2021 | ND | 15.23 | NA | 6901.04 | 6916.36 | 6918.92 | 2.65 | 28.41 | 13.0 | 28.0 |
| OW-54 | 9/23/2021 | ND | 15.89 | NA | 6900.38 | 6916.36 | 6918.92 | 2.65 | 28.41 | 13.0 | 28.0 |
| OW-54 | 12/28/2021 | ND | 15.40 | NA | 6900.87 | 6916.36 | 6918.92 | 2.65 | 28.41 | 13.0 | 28.0 |
| OW-54 | 3/2/2022 | ND | 15.38 | NA | 6900.89 | 6916.36 | 6918.92 | 2.65 | 27.05 | 13.0 | 28.0 |
| OW-54 | 6/2/2022 | ND | 15.70 | NA | 6900.57 | 6916.36 | 6918.92 | 2.65 | 27.08 | 13.0 | 28.0 |
| OW-54 | 9/6/2022 | ND | 16.39 | NA | 6899.88 | 6916.36 | 6918.92 | 2.65 | 27.10 | 13.0 | 28.0 |
| OW-54 | 10/4/2022 | ND | 16.35 | NA | 6899.92 | 6916.36 | 6918.92 | 2.65 | 27.10 | 13.0 | 28.0 |
| OW-54 | 11/3/2022 | ND | 17.45 | NA | 6898.82 | 6916.36 | 6918.92 | 2.65 | 27.10 | 13.0 | 28.0 |
| OW-54 | 12/6/2022 | ND | 16.48 | NA | 6899.79 | 6916.36 | 6918.92 | 2.65 | 27.10 | 13.0 | 28.0 |
| OW-55 | 3/29/2017 | ND | 16.15 | NA | 6904.86 | 6921.01 | 6923.25 | 2.24 | 28.46 | 13.0 | 28.0 |
| OW-55 | 6/21/2017 | ND | 16.23 | NA | 6904.78 | 6921.01 | 6923.25 | 2.24 | 28.46 | 13.0 | 28.0 |
| OW-55 | 9/11/2017 | ND | 16.25 | NA | 6904.76 | 6921.01 | 6923.25 | 2.24 | 28.46 | 13.0 | 28.0 |
| OW-55 | 12/5/2017 | ND | 15.81 | NA | 6905.20 | 6921.01 | 6923.25 | 2.24 | 28.66 | 13.0 | 28.0 |
| OW-55 | 2/21/2018 | ND | 15.56 | NA | 6905.45 | 6921.01 | 6923.25 | 2.24 | 28.71 | 13.0 | 28.0 |
| OW-55 | 4/26/2018 | ND | 15.37 | NA | 6905.64 | 6921.01 | 6923.25 | 2.24 | 28.68 | 13.0 | 28.0 |
| OW-55 | 8/14/2018 | ND | 15.70 | NA | 6905.31 | 6921.01 | 6923.25 | 2.24 | 28.46 | 13.0 | 28.0 |
| OW-55 | 11/6/2018 | ND | 15.48 | NA | 6905.53 | 6921.01 | 6923.25 | 2.24 | 28.66 | 13.0 | 28.0 |
| OW-55 | 2/6/2019 | ND | 15.14 | NA | 6905.88 | 6921.01 | 6923.25 | 2.23 | 28.47 | 13.0 | 28.0 |
| OW-55 | 5/2/2019 | ND | 15.15 | NA | 6905.87 | 6921.01 | 6923.25 | 2.23 | 28.47 | 13.0 | 28.0 |
| OW-55 | 8/21/2019 | ND | 15.47 | NA | 6905.55 | 6921.01 | 6923.25 | 2.23 | 28.47 | 13.0 | 28.0 |
| OW-55 | 10/15/2019 | ND | 15.50 | NA | 6905.52 | 6921.01 | 6923.25 | 2.23 | 28.67 | 13.0 | 28.0 |
| OW-55 | 3/2/2020 | ND | 14.73 | NA | 6906.29 | 6921.01 | 6923.25 | 2.23 | 28.47 | 13.0 | 28.0 |
| OW-55 | 6/30/2020 | ND | 15.19 | NA | 6905.83 | 6921.01 | 6923.25 | 2.23 | 28.47 | 13.0 | 28.0 |
| OW-55 | 9/14/2020 | ND | 15.73 | NA | 6905.29 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 10/9/2020 | ND | 15.47 | NA | 6905.55 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 12/7/2020 | ND | 15.38 | NA | 6905.64 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 2/27/2021 | ND | 15.16 | NA | 6905.86 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 6/2/2021 | ND | 15.59 | NA | 6905.43 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 9/23/2021 | ND | 16.24 | NA | 6904.78 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |
| OW-55 | 12/28/2021 | ND | 15.87 | NA | 6905.15 | 6921.01 | 6923.25 | 2.23 | 22.25 | 13.0 | 28.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-55 | 3/2/2022 | ND | 15.85 | NA | 6905.17 | 6921.01 | 6923.25 | 2.23 | 28.09 | 13.0 | 28.0 |
| OW-55 | 6/2/2022 | ND | 16.27 | NA | 6904.75 | 6921.01 | 6923.25 | 2.23 | 27.97 | 13.0 | 28.0 |
| OW-55 | 9/7/2022 | ND | 16.92 | NA | 6904.10 | 6921.01 | 6923.25 | 2.23 | 27.97 | 13.0 | 28.0 |
| OW-55 | 10/4/2022 | ND | 16.94 | NA | 6904.08 | 6921.01 | 6923.25 | 2.23 | 27.97 | 13.0 | 28.0 |
| OW-55 | 11/3/2022 | ND | 17.54 | NA | 6903.48 | 6921.01 | 6923.25 | 2.23 | 27.97 | 13.0 | 28.0 |
| OW-55 | 12/6/2022 | ND | 16.99 | NA | 6904.03 | 6921.01 | 6923.25 | 2.23 | 27.97 | 13.0 | 28.0 |
| OW-56 | 3/29/2017 | ND | 9.90 | NA | 6907.89 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 6/21/2017 | ND | 11.14 | NA | 6906.65 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 9/11/2017 | ND | 12.11 | NA | 6905.68 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 12/5/2017 | ND | 11.04 | NA | 6906.75 | 6917.79 | 6920.18 | 2.39 | 16.19 | 6.0 | 16.0 |
| OW-56 | 2/21/2018 | ND | 10.45 | NA | 6907.34 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 4/26/2018 | ND | 10.23 | NA | 6907.56 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 8/14/2018 | ND | 11.43 | NA | 6906.36 | 6917.79 | 6920.18 | 2.39 | 16.20 | 6.0 | 16.0 |
| OW-56 | 11/6/2018 | ND | 11.66 | NA | 6906.13 | 6917.79 | 6920.18 | 2.39 | 16.19 | 6.0 | 16.0 |
| OW-56 | 2/6/2019 | ND | 10.43 | NA | 6907.18 | 6917.79 | 6920.18 | 2.57 | 16.02 | 6.0 | 16.0 |
| OW-56 | 5/2/2019 | ND | 9.93 | NA | 6907.68 | 6917.79 | 6920.18 | 2.57 | 16.02 | 6.0 | 16.0 |
| OW-56 | 8/21/2019 | ND | 11.09 | NA | 6906.52 | 6917.79 | 6920.18 | 2.57 | 16.02 | 6.0 | 16.0 |
| OW-56 | 10/15/2019 | ND | 11.81 | NA | 6905.80 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 3/2/2020 | ND | 10.45 | NA | 6907.16 | 6917.79 | 6920.18 | 2.57 | 16.02 | 6.0 | 16.0 |
| OW-56 | 6/30/2020 | ND | 11.76 | NA | 6905.85 | 6917.79 | 6920.18 | 2.57 | 16.02 | 6.0 | 16.0 |
| OW-56 | 9/14/2020 | ND | 11.79 | NA | 6905.82 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 11/9/2020 | ND | 11.64 | NA | 6905.97 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 12/7/2020 | ND | 11.16 | NA | 6906.45 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 2/27/2021 | ND | 10.51 | NA | 6907.10 | 6917.79 | 6920.18 | 2.57 | 16.04 | 6.0 | 16.0 |
| OW-56 | 6/2/2021 | ND | 11.18 | NA | 6906.43 | 6917.79 | 6920.18 | 2.57 | 16.04 | 6.0 | 16.0 |
| OW-56 | 9/23/2021 | ND | 11.81 | NA | 6905.80 | 6917.79 | 6920.18 | 2.57 | 16.04 | 6.0 | 16.0 |
| OW-56 | 12/22/2021 | ND | 10.78 | NA | 6906.83 | 6917.79 | 6920.18 | 2.57 | 16.04 | 6.0 | 16.0 |
| OW-56 | 3/2/2022 | ND | 10.73 | NA | 6906.88 | 6917.79 | 6920.18 | 2.57 | 16.03 | 6.0 | 16.0 |
| OW-56 | 6/2/2022 | ND | 10.83 | NA | 6906.78 | 6917.79 | 6920.18 | 2.57 | 16.03 | 6.0 | 16.0 |
| OW-56 | 9/2/2022 | ND | 11.66 | NA | 6905.95 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 10/4/2022 | ND | 11.63 | NA | 6905.98 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 11/3/2022 | ND | 11.61 | NA | 6906.00 | 6917.79 | 6920.18 | 2.57 | 16.01 | 6.0 | 16.0 |
| OW-56 | 12/6/2022 | ND | 11.78 | NA | 6905.83 | 6917.79 | 6920.18 | 2.57 | 16.03 | 6.0 | 16.0 |
| OW-57 | 3/30/2017 | NA | NA | NA | NA | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 6/20/2017 | ND | 18.06 | NA | 6912.58 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 9/19/2017 | ND | 17.69 | NA | 6912.95 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 12/5/2017 | ND | 17.65 | NA | 6912.99 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 2/19/2018 | ND | 17.42 | NA | 6913.22 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 4/25/2018 | ND | 17.56 | NA | 6913.08 | 6930.64 | 6933.10 | 2.46 | 25.60 | 15.0 | 25.0 |
| OW-57 | 8/15/2018 | ND | 17.70 | NA | 6912.94 | 6930.64 | 6933.10 | 2.46 | 25.61 | 15.0 | 25.0 |
| OW-57 | 11/29/2018 | ND | 17.84 | NA | 6912.80 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 2/19/2019 | ND | 17.83 | NA | 6912.81 | 6930.64 | 6933.10 | 2.46 | 25.64 | 15.0 | 25.0 |
| OW-57 | 5/15/2019 | ND | 17.56 | NA | 6913.08 | 6930.64 | 6933.10 | 2.46 | 25.64 | 15.0 | 25.0 |
| OW-57 | 8/20/2019 | ND | 17.32 | NA | 6913.32 | 6930.64 | 6933.10 | 2.46 | 25.61 | 15.0 | 25.0 |
| OW-57 | 11/4/2019 | ND | 17.51 | NA | 6913.13 | 6930.64 | 6933.10 | 2.46 | 25.89 | 15.0 | 25.0 |
| OW-57 | 3/4/2020 | ND | 17.51 | NA | 6913.13 | 6930.64 | 6933.10 | 2.46 | 25.64 | 15.0 | 25.0 |
| OW-57 | 6/30/2020 | ND | 17.76 | NA | 6912.88 | 6930.64 | 6933.10 | 2.46 | 25.64 | 15.0 | 25.0 |
| OW-57 | 9/14/2020 | ND | 18.04 | NA | 6912.60 | 6930.64 | 6933.10 | 2.46 | 25.63 | 15.0 | 25.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-57 | 11/9/2020 | ND | 18.07 | NA | 6912.57 | 6930.64 | 6933.10 | 2.46 | 25.63 | 15.0 | 25.0 |
| OW-57 | 12/7/2020 | ND | 18.18 | NA | 6912.46 | 6930.64 | 6933.10 | 2.46 | 25.93 | 15.0 | 25.0 |
| OW-57 | 1/28/2021 | ND | 18.27 | NA | 6912.37 | 6930.64 | 6933.10 | 2.46 | 25.93 | 15.0 | 25.0 |
| OW-57 | 2/27/2021 | ND | 18.27 | NA | 6912.37 | 6930.64 | 6933.10 | 2.46 | 25.63 | 15.0 | 25.0 |
| OW-57 | 3/31/2021 | ND | 18.52 | NA | 6912.12 | 6930.64 | 6933.10 | 2.46 | 25.33 | 15.0 | 25.0 |
| OW-57 | 4/26/2021 | ND | 18.61 | NA | 6912.03 | 6930.64 | 6933.10 | 2.46 | 25.03 | 15.0 | 25.0 |
| OW-57 | 5/20/2021 | ND | 17.42 | NA | 6913.22 | 6930.64 | 6933.10 | 2.46 | 24.73 | 15.0 | 25.0 |
| OW-57 | 6/2/2021 | ND | 18.57 | NA | 6912.07 | 6930.64 | 6933.10 | 2.46 | 24.73 | 15.0 | 25.0 |
| OW-57 | 9/9/2021 | ND | 19.24 | NA | 6911.40 | 6930.64 | 6933.10 | 2.46 | 24.73 | 15.0 | 25.0 |
| OW-57 | 12/13/2021 | ND | 19.29 | NA | 6911.35 | 6930.64 | 6933.10 | 2.46 | 24.73 | 15.0 | 25.0 |
| OW-57 | 1/10/2022 | ND | 19.17 | NA | 6911.47 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 2/28/2022 | ND | 19.15 | NA | 6911.49 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 3/1/2022 | ND | 19.34 | NA | 6911.30 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 4/27/2022 | ND | 19.69 | NA | 6910.95 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 5/5/2022 | ND | 19.76 | NA | 6910.88 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 6/2/2022 | ND | 19.89 | NA | 6910.75 | 6930.64 | 6933.10 | 2.46 | 25.92 | 15.0 | 25.0 |
| OW-57 | 7/7/2022 | ND | 19.58 | NA | 6911.06 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 8/9/2022 | ND | 19.49 | NA | 6911.15 | 6930.64 | 6933.10 | 2.46 | 25.62 | 15.0 | 25.0 |
| OW-57 | 9/2/2022 | ND | 20.19 | NA | 6910.45 | 6930.64 | 6933.10 | 2.46 | 25.92 | 15.0 | 25.0 |
| OW-57 | 10/4/2022 | ND | 20.17 | NA | 6910.47 | 6930.64 | 6933.10 | 2.46 | 25.92 | 15.0 | 25.0 |
| OW-57 | 11/3/2022 | ND | 20.09 | NA | 6910.55 | 6930.64 | 6933.10 | 2.46 | 25.92 | 15.0 | 25.0 |
| OW-57 | 12/7/2022 | ND | 20.47 | NA | 6910.17 | 6930.64 | 6933.10 | 2.46 | 25.92 | 15.0 | 25.0 |
| OW-58 | 3/29/2017 | ND | 26.21 | NA | 6908.50 | 6934.71 | 6934.50 | -0.21 | 47.76 | 38.0 | 48.0 |
| OW-58 | 6/21/2017 | ND | 25.35 | NA | 6909.36 | 6934.71 | 6934.50 | -0.21 | 47.76 | 38.0 | 48.0 |
| OW-58 | 9/19/2017 | ND | 25.25 | NA | 6909.46 | 6934.71 | 6934.50 | -0.21 | 47.76 | 38.0 | 48.0 |
| OW-58 | 12/6/2017 | ND | 24.88 | NA | 6909.83 | 6934.71 | 6934.50 | -0.21 | 47.71 | 38.0 | 48.0 |
| OW-58 | 2/20/2018 | ND | 24.73 | NA | 6909.98 | 6934.71 | 6934.50 | -0.21 | 47.83 | 38.0 | 48.0 |
| OW-58 | 4/25/2018 | ND | 24.46 | NA | 6910.25 | 6934.71 | 6934.50 | -0.21 | 47.71 | 38.0 | 48.0 |
| OW-58 | 8/16/2018 | ND | 24.69 | NA | 6910.02 | 6934.71 | 6934.50 | -0.21 | 47.70 | 38.0 | 48.0 |
| OW-58 | 11/29/2018 | ND | 24.48 | NA | 6910.23 | 6934.71 | 6934.50 | -0.21 | 47.71 | 38.0 | 48.0 |
| OW-58 | 3/28/2019 | ND | 24.49 | NA | 6910.22 | 6934.71 | 6934.50 | -0.21 | 47.51 | 38.0 | 48.0 |
| OW-58 | 6/5/2019 | ND | 24.30 | NA | 6910.41 | 6934.71 | 6934.50 | -0.21 | 47.51 | 38.0 | 48.0 |
| OW-58 | 8/20/2019 | ND | 24.21 | NA | 6910.50 | 6934.71 | 6934.50 | -0.21 | 47.70 | 38.0 | 48.0 |
| OW-58 | 11/18/2019 | ND | 24.20 | NA | 6910.51 | 6934.71 | 6934.50 | -0.21 | 47.71 | 38.0 | 48.0 |
| OW-58 | 6/30/2020 | ND | 24.33 | NA | 6910.38 | 6934.71 | 6934.50 | -0.21 | 47.71 | 38.0 | 48.0 |
| OW-58 | 9/14/2020 | ND | 24.66 | NA | 6910.05 | 6934.71 | 6934.50 | -0.21 | 48.21 | 38.0 | 48.0 |
| OW-58 | 11/9/2020 | ND | 23.52 | NA | 6911.19 | 6934.71 | 6934.50 | -0.21 | 48.21 | 38.0 | 48.0 |
| OW-58 | 12/8/2020 | ND | 24.53 | NA | 6910.18 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 1/28/2021 | ND | 24.50 | NA | 6910.21 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 2/28/2021 | ND | 24.36 | NA | 6910.35 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 3/31/2021 | ND | 24.61 | NA | 6910.10 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 4/26/2021 | ND | 25.04 | NA | 6909.67 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 5/20/2021 | ND | 23.54 | NA | 6911.17 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 6/2/2021 | ND | 24.84 | NA | 6909.87 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 9/9/2021 | ND | 25.41 | NA | 6909.30 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 12/13/2021 | ND | 25.42 | NA | 6909.29 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 1/10/2022 | ND | 25.18 | NA | 6909.53 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 2/28/2022 | ND | 25.21 | NA | 6909.50 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-58 | 3/1/2022 | ND | 25.51 | NA | 6909.20 | 6934.71 | 6934.50 | -0.21 | 47.69 | 38.0 | 48.0 |
| OW-58 | 4/27/2022 | ND | 25.65 | NA | 6909.06 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 5/5/2022 | ND | 25.82 | NA | 6908.89 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 6/2/2022 | ND | 26.01 | NA | 6908.70 | 6934.71 | 6934.50 | -0.21 | 47.68 | 38.0 | 48.0 |
| OW-58 | 7/7/2022 | ND | 24.64 | NA | 6910.07 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 8/9/2022 | ND | 25.52 | NA | 6909.19 | 6934.71 | 6934.50 | -0.21 | 48.16 | 38.0 | 48.0 |
| OW-58 | 9/2/2022 | ND | 26.06 | NA | 6908.65 | 6934.71 | 6934.50 | -0.21 | 47.68 | 38.0 | 48.0 |
| OW-58 | 10/4/2022 | ND | 26.13 | NA | 6908.58 | 6934.71 | 6934.50 | -0.21 | 47.68 | 38.0 | 48.0 |
| OW-58 | 11/3/2022 | ND | 26.19 | NA | 6908.52 | 6934.71 | 6934.50 | -0.21 | 47.68 | 38.0 | 48.0 |
| OW-58 | 12/6/2022 | ND | 26.26 | NA | 6908.45 | 6934.71 | 6934.50 | -0.21 | 47.68 | 38.0 | 48.0 |
| OW-58A | 3/5/2020 | ND | 23.23 | NA | 6909.75 | 6932.98 | 6935.88 | 2.90 | 33.10 | 13.0 | 33.0 |
| OW-58A | 6/30/2020 | ND | 23.60 | NA | 6909.38 | 6932.98 | 6935.88 | 2.90 | 44.40 | 13.0 | 33.0 |
| OW-58A | 9/15/2020 | ND | 23.97 | NA | 6909.01 | 6932.98 | 6935.88 | 2.90 | 33.10 | 13.0 | 33.0 |
| OW-58A | 11/9/2020 | ND | 21.41 | NA | 6911.57 | 6932.98 | 6935.88 | 2.90 | 34.01 | 13.0 | 33.0 |
| OW-58A | 12/8/2020 | ND | 23.81 | NA | 6909.17 | 6932.98 | 6935.88 | 2.90 | 33.48 | 13.0 | 33.0 |
| OW-58A | 1/28/2021 | ND | 23.76 | NA | 6909.22 | 6932.98 | 6935.88 | 2.90 | 33.48 | 13.0 | 33.0 |
| OW-58A | 2/28/2021 | ND | 23.61 | NA | 6909.37 | 6932.98 | 6935.88 | 2.90 | 33.60 | 13.0 | 33.0 |
| OW-58A | 3/31/2021 | ND | 23.88 | NA | 6909.10 | 6932.98 | 6935.88 | 2.90 | 33.72 | 13.0 | 33.0 |
| OW-58A | 4/26/2021 | ND | 24.11 | NA | 6908.87 | 6932.98 | 6935.88 | 2.90 | 33.84 | 13.0 | 33.0 |
| OW-58A | 5/20/2021 | ND | 23.41 | NA | 6909.57 | 6932.98 | 6935.88 | 2.90 | 33.96 | 13.0 | 33.0 |
| OW-58A | 6/2/2021 | ND | 23.73 | NA | 6909.25 | 6932.98 | 6935.88 | 2.90 | 33.96 | 13.0 | 33.0 |
| OW-58A | 9/9/2021 | ND | 24.70 | NA | 6908.28 | 6932.98 | 6935.88 | 2.90 | 33.96 | 13.0 | 33.0 |
| OW-58A | 12/13/2021 | ND | 24.65 | NA | 6908.33 | 6932.98 | 6935.88 | 2.90 | 33.96 | 13.0 | 33.0 |
| OW-58A | 1/10/2022 | ND | 24.43 | NA | 6908.55 | 6932.98 | 6935.88 | 2.90 | 33.50 | 13.0 | 33.0 |
| OW-58A | 2/28/2022 | ND | 24.40 | NA | 6908.58 | 6932.98 | 6935.88 | 2.90 | 33.50 | 13.0 | 33.0 |
| OW-58A | 3/1/2022 | ND | 24.60 | NA | 6908.38 | 6932.98 | 6935.88 | 2.90 | 33.65 | 13.0 | 33.0 |
| OW-58A | 4/27/2022 | ND | 25.24 | NA | 6907.74 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 5/5/2022 | ND | 25.23 | NA | 6907.75 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 6/2/2022 | ND | 25.30 | NA | 6907.68 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 7/7/2022 | ND | 23.30 | NA | 6909.68 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 8/9/2022 | ND | 23.43 | NA | 6909.55 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 9/2/2022 | ND | 25.30 | NA | 6907.68 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 10/4/2022 | ND | 25.27 | NA | 6907.71 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 11/3/2022 | ND | 25.05 | NA | 6907.93 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-58A | 12/16/2022 | 25.65 | 27.01 | 1.36 | 6905.97 | 6932.98 | 6935.88 | 2.90 | 33.45 | 13.0 | 33.0 |
| OW-59 | 9/21/2017 | ND | 22.20 | NA | 6865.43 | 6887.63 | 6889.73 | 2.10 | 36.20 | 20.0 | 35.0 |
| OW-59 | 12/5/2017 | ND | 22.20 | NA | 6865.43 | 6887.63 | 6889.73 | 2.10 | 36.40 | 20.0 | 35.0 |
| OW-59 | 2/21/2018 | ND | 21.90 | NA | 6865.73 | 6887.63 | 6889.73 | 2.10 | 36.45 | 20.0 | 35.0 |
| OW-59 | 4/26/2018 | ND | 21.95 | NA | 6865.68 | 6887.63 | 6889.73 | 2.10 | 36.38 | 20.0 | 35.0 |
| OW-59 | 8/14/2018 | ND | 22.03 | NA | 6865.60 | 6887.63 | 6889.73 | 2.10 | 36.42 | 20.0 | 35.0 |
| OW-59 | 11/6/2018 | ND | 21.80 | NA | 6865.83 | 6887.63 | 6889.73 | 2.10 | 36.40 | 20.0 | 35.0 |
| OW-59 | 2/13/2019 | ND | 21.64 | NA | 6865.83 | 6887.63 | 6889.73 | 2.26 | 36.04 | 20.0 | 35.0 |
| OW-59 | 5/2/2019 | ND | 21.54 | NA | 6865.93 | 6887.63 | 6889.73 | 2.26 | 36.04 | 20.0 | 35.0 |
| OW-59 | 8/21/2019 | ND | 21.76 | NA | 6865.71 | 6887.63 | 6889.73 | 2.26 | 36.26 | 20.0 | 35.0 |
| OW-59 | 10/15/2019 | ND | 21.85 | NA | 6865.62 | 6887.63 | 6889.73 | 2.26 | 36.24 | 20.0 | 35.0 |
| OW-59 | 3/3/2020 | ND | 21.27 | NA | 6866.20 | 6887.63 | 6889.73 | 2.26 | 36.24 | 20.0 | 35.0 |
| OW-59 | 6/30/2020 | ND | 21.41 | NA | 6866.06 | 6887.63 | 6889.73 | 2.26 | 36.04 | 20.0 | 35.0 |
| OW-59 | 9/14/2020 | ND | 21.80 | NA | 6865.67 | 6887.63 | 6889.73 | 2.26 | 36.26 | 20.0 | 35.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-59 | 12/7/2020 | ND | 21.65 | NA | 6865.82 | 6887.63 | 6889.73 | 2.26 | 36.29 | 20.0 | 35.0 |
| OW-59 | 2/27/2021 | ND | 21.38 | NA | 6866.09 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 6/2/2021 | ND | 21.44 | NA | 6866.03 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 9/8/2021 | ND | 21.74 | NA | 6865.73 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 12/22/2021 | ND | 21.59 | NA | 6865.88 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 3/2/2022 | ND | 21.67 | NA | 6865.80 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 6/2/2022 | ND | 21.58 | NA | 6865.89 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 9/2/2022 | ND | 21.84 | NA | 6865.63 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 10/4/2022 | ND | 21.83 | NA | 6865.64 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 11/3/2022 | ND | 21.94 | NA | 6865.53 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-59 | 12/28/2022 | ND | 21.86 | NA | 6865.61 | 6887.63 | 6889.73 | 2.26 | 36.34 | 20.0 | 35.0 |
| OW-60 | 9/21/2017 | ND | 14.00 | NA | 6877.06 | 6891.06 | 6893.51 | 2.45 | 43.10 | 25.0 | 45.0 |
| OW-60 | 12/5/2017 | ND | 13.95 | NA | 6877.11 | 6891.06 | 6893.51 | 2.45 | 43.25 | 25.0 | 45.0 |
| OW-60 | 2/21/2018 | ND | 13.81 | NA | 6877.25 | 6891.06 | 6893.51 | 2.45 | 43.61 | 25.0 | 45.0 |
| OW-60 | 4/26/2018 | ND | 14.07 | NA | 6876.99 | 6891.06 | 6893.51 | 2.45 | 43.70 | 25.0 | 45.0 |
| OW-60 | 8/14/2018 | ND | 14.07 | NA | 6876.99 | 6891.06 | 6893.51 | 2.45 | 43.97 | 25.0 | 45.0 |
| OW-60 | 11/6/2018 | ND | 13.80 | NA | 6877.26 | 6891.06 | 6893.51 | 2.45 | 43.25 | 25.0 | 45.0 |
| OW-60 | 2/13/2019 | ND | 13.86 | NA | 6877.08 | 6891.06 | 6893.51 | 2.57 | 42.93 | 25.0 | 45.0 |
| OW-60 | 5/2/2019 | ND | 13.98 | NA | 6876.96 | 6891.06 | 6893.51 | 2.57 | 42.93 | 25.0 | 45.0 |
| OW-60 | 8/21/2019 | ND | 13.96 | NA | 6876.98 | 6891.06 | 6893.51 | 2.57 | 43.85 | 25.0 | 45.0 |
| OW-60 | 10/15/2019 | ND | 13.84 | NA | 6877.10 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 3/3/2020 | ND | 13.57 | NA | 6877.37 | 6891.06 | 6893.51 | 2.57 | 42.93 | 25.0 | 45.0 |
| OW-60 | 6/30/2020 | ND | 13.93 | NA | 6877.01 | 6891.06 | 6893.51 | 2.57 | 42.93 | 25.0 | 45.0 |
| OW-60 | 9/14/2020 | ND | 14.00 | NA | 6876.94 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 11/9/2020 | ND | 13.78 | NA | 6877.16 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 12/7/2020 | ND | 13.98 | NA | 6876.96 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 1/28/2021 | ND | 13.88 | NA | 6877.06 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 2/27/2021 | ND | 13.90 | NA | 6877.04 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 6/2/2021 | ND | 14.09 | NA | 6876.85 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 9/29/2021 | ND | 15.79 | NA | 6875.15 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 12/1/2021 | ND | 14.18 | NA | 6876.76 | 6891.06 | 6893.51 | 2.57 | 43.13 | 25.0 | 45.0 |
| OW-60 | 3/2/2022 | ND | 14.15 | NA | 6876.79 | 6891.06 | 6893.51 | 2.57 | 41.20 | 25.0 | 45.0 |
| OW-60 | 6/2/2022 | ND | 13.97 | NA | 6876.97 | 6891.06 | 6893.51 | 2.57 | 44.25 | 25.0 | 45.0 |
| OW-60 | 9/2/2022 | ND | 14.37 | NA | 6876.57 | 6891.06 | 6893.51 | 2.57 | 44.28 | 25.0 | 45.0 |
| OW-60 | 10/4/2022 | ND | 14.33 | NA | 6876.61 | 6891.06 | 6893.51 | 2.57 | 44.28 | 25.0 | 45.0 |
| OW-60 | 11/3/2022 | ND | 14.46 | NA | 6876.48 | 6891.06 | 6893.51 | 2.57 | 44.28 | 25.0 | 45.0 |
| OW-60 | 12/28/2022 | ND | 14.46 | NA | 6876.48 | 6891.06 | 6893.51 | 2.57 | 44.28 | 25.0 | 45.0 |
| OW-61 | 3/21/2018 | 14.05 | 14.14 | 0.09 | NA | 6960.91 | NA | 2.66 | 29.02 | 8.0 | 28.0 |
| OW-61 | 4/24/2018 | 14.56 | 15.38 | 0.82 | NA | 6960.91 | NA | 2.66 | 29.01 | 8.0 | 28.0 |
| OW-61 | 8/16/2018 | 14.74 | 19.44 | 4.70 | NA | 6960.91 | NA | 2.66 | 29.04 | 8.0 | 28.0 |
| OW-61 | 11/29/2018 | 15.29 | 19.34 | 4.05 | NA | 6960.91 | NA | 2.66 | 29.34 | 8.0 | 28.0 |
| OW-61 | 2/19/2019 | 15.41 | 19.50 | 4.09 | NA | 6960.91 | NA | 2.59 | 29.41 | 8.0 | 28.0 |
| OW-61 | 5/15/2019 | 15.03 | 18.54 | 3.51 | NA | 6960.91 | NA | 2.59 | 29.41 | 8.0 | 28.0 |
| OW-61 | 8/20/2019 | 14.83 | 17.56 | 2.73 | NA | 6960.91 | NA | 2.59 | 29.11 | 8.0 | 28.0 |
| OW-61 | 11/4/2019 | 14.95 | 18.04 | 3.09 | NA | 6960.91 | NA | 2.59 | 29.41 | 8.0 | 28.0 |
| OW-61 | 3/4/2020 | 15.69 | 18.50 | 2.81 | 6942.48 | 6960.91 | 6963.57 | 2.59 | 29.41 | 8.0 | 28.0 |
| OW-61 | 6/29/2020 | 14.58 | 15.45 | 0.87 | 6945.53 | 6960.91 | 6963.57 | 2.59 | 29.41 | 8.0 | 28.0 |
| OW-61 | 9/15/2020 | 14.29 | 16.81 | 2.52 | 6944.17 | 6960.91 | 6963.57 | 2.59 | 29.26 | 8.0 | 28.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-61 | 11/9/2020 | 15.63 | 16.99 | 1.36 | 6943.99 | 6960.91 | 6963.57 | 2.59 | 29.26 | 8.0 | 28.0 |
| OW-61 | 12/8/2020 | 15.81 | 17.71 | 1.90 | 6943.27 | 6960.91 | 6963.57 | 2.59 | 28.74 | 8.0 | 28.0 |
| OW-61 | 1/28/2021 | 16.54 | 17.19 | 0.65 | 6943.79 | 6960.91 | 6963.57 | 2.59 | 28.22 | 8.0 | 28.0 |
| OW-61 | 2/27/2021 | 16.30 | 17.51 | 1.21 | 6943.47 | 6960.91 | 6963.57 | 2.59 | 29.24 | 8.0 | 28.0 |
| OW-61 | 3/31/2021 | 16.23 | 18.69 | 2.46 | 6942.29 | 6960.91 | 6963.57 | 2.59 | 30.26 | 8.0 | 28.0 |
| OW-61 | 4/26/2021 | 16.34 | 18.84 | 2.50 | 6942.14 | 6960.91 | 6963.57 | 2.59 | 31.28 | 8.0 | 28.0 |
| OW-61 | 5/20/2021 | 16.52 | 19.36 | 2.84 | 6941.62 | 6960.91 | 6963.57 | 2.59 | 32.30 | 8.0 | 28.0 |
| OW-61 | 6/2/2021 | 16.03 | 18.30 | 2.27 | 6942.68 | 6960.91 | 6963.57 | 2.59 | 32.30 | 8.0 | 28.0 |
| OW-61 | 9/7/2021 | 17.77 | 21.19 | 3.42 | 6939.79 | 6960.91 | 6963.57 | 2.59 | 32.30 | 8.0 | 28.0 |
| OW-61 | 12/2/2021 | 19.10 | 19.79 | 0.69 | 6941.19 | 6960.91 | 6963.57 | 2.59 | 32.30 | 8.0 | 28.0 |
| OW-61 | 1/10/2022 | 20.39 | 20.61 | 0.22 | 6940.37 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 2/28/2022 | 20.43 | 20.61 | 0.18 | 6940.37 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 3/2/2022 | 19.11 | 19.81 | 0.70 | 6941.17 | 6960.91 | 6963.57 | 2.59 | 32.27 | 8.0 | 28.0 |
| OW-61 | 4/27/2022 | 19.54 | 20.46 | 0.92 | 6940.52 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 5/9/2022 | 21.91 | 22.53 | 0.62 | 6938.45 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 6/2/2022 | 22.09 | 22.80 | 0.71 | 6938.18 | 6960.91 | 6963.57 | 2.59 | 32.27 | 8.0 | 28.0 |
| OW-61 | 7/7/2022 | 22.05 | 23.34 | 1.29 | 6937.64 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 8/9/2022 | 21.83 | 23.18 | 1.35 | 6937.80 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 9/2/2022 | 21.73 | 23.19 | 1.46 | 6937.79 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 10/4/2022 | 21.64 | 23.20 | 1.56 | 6937.78 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 11/3/2022 | 21.41 | 23.20 | 1.79 | 6937.78 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-61 | 12/6/2022 | 22.39 | 23.55 | 1.16 | 6937.43 | 6960.91 | 6963.57 | 2.59 | 32.28 | 8.0 | 28.0 |
| OW-62 | 3/21/2018 | ND | 20.30 | NA | 6914.43 | 6934.73 | 6937.36 | 2.63 | 28.94 | 8.0 | 28.0 |
| OW-62 | 4/24/2018 | ND | 20.51 | NA | 6914.22 | 6934.73 | 6937.36 | 2.63 | 28.95 | 8.0 | 28.0 |
| OW-62 | 8/15/2018 | ND | 21.07 | NA | 6913.66 | 6934.73 | 6937.36 | 2.63 | 28.96 | 8.0 | 28.0 |
| OW-62 | 11/29/2018 | ND | 21.36 | NA | 6913.37 | 6934.73 | 6937.36 | 2.63 | 28.96 | 8.0 | 28.0 |
| OW-62 | 2/19/2019 | 20.87 | 22.07 | 1.20 | 6912.41 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 5/15/2019 | 20.52 | 21.12 | 0.60 | 6913.36 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 8/20/2019 | 20.98 | 21.41 | 0.43 | 6913.07 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 11/18/2019 | 20.84 | 21.46 | 0.62 | 6913.02 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 3/10/2020 | 20.70 | 21.28 | 0.58 | 6913.20 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 6/30/2020 | 20.74 | 21.03 | 0.29 | 6913.45 | 6934.73 | 6937.36 | 2.88 | 28.59 | 8.0 | 28.0 |
| OW-62 | 9/15/2020 | 20.74 | 20.99 | 0.25 | 6913.49 | 6934.73 | 6937.36 | 2.88 | 29.17 | 8.0 | 28.0 |
| OW-62 | 11/9/2020 | 20.82 | 21.12 | 0.30 | 6913.36 | 6934.73 | 6937.36 | 2.88 | 29.17 | 8.0 | 28.0 |
| OW-62 | 12/8/2020 | 20.81 | 21.10 | 0.29 | 6913.38 | 6934.73 | 6937.36 | 2.88 | 28.78 | 8.0 | 28.0 |
| OW-62 | 1/28/2021 | 20.87 | 21.17 | 0.30 | 6913.31 | 6934.73 | 6937.36 | 2.88 | 28.39 | 8.0 | 28.0 |
| OW-62 | 2/27/2021 | 20.94 | 21.27 | 0.33 | 6913.21 | 6934.73 | 6937.36 | 2.88 | 28.79 | 8.0 | 28.0 |
| OW-62 | 3/31/2021 | 20.97 | 21.28 | 0.31 | 6913.20 | 6934.73 | 6937.36 | 2.88 | 29.19 | 8.0 | 28.0 |
| OW-62 | 4/26/2021 | 21.05 | 21.22 | 0.17 | 6913.26 | 6934.73 | 6937.36 | 2.88 | 29.59 | 8.0 | 28.0 |
| OW-62 | 5/20/2021 | 20.92 | 21.56 | 0.64 | 6912.92 | 6934.73 | 6937.36 | 2.88 | 29.99 | 8.0 | 28.0 |
| OW-62 | 6/2/2021 | 20.09 | 20.34 | 0.25 | 6914.14 | 6934.73 | 6937.36 | 2.88 | 29.99 | 8.0 | 28.0 |
| OW-62 | 9/9/2021 | 20.57 | 20.78 | 0.21 | 6913.70 | 6934.73 | 6937.36 | 2.88 | 29.99 | 8.0 | 28.0 |
| OW-62 | 12/9/2021 | 20.92 | 21.26 | 0.34 | 6913.22 | 6934.73 | 6937.36 | 2.88 | 29.99 | 8.0 | 28.0 |
| OW-62 | 1/10/2022 | 20.10 | 20.67 | 0.57 | 6913.81 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 2/28/2022 | 20.14 | 20.57 | 0.43 | 6913.91 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 3/2/2022 | 20.89 | 21.27 | 0.38 | 6913.21 | 6934.73 | 6937.36 | 2.88 | 29.90 | 8.0 | 28.0 |
| OW-62 | 4/27/2022 | 21.31 | 21.64 | 0.33 | 6912.84 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 5/9/2022 | 21.11 | 21.45 | 0.34 | 6913.03 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-62 | 6/2/2022 | 20.87 | 21.22 | 0.35 | 6913.26 | 6934.73 | 6937.36 | 2.88 | 34.90 | 8.0 | 28.0 |
| OW-62 | 7/7/2022 | 21.12 | 21.50 | 0.38 | 6912.98 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 8/9/2022 | 21.21 | 21.56 | 0.35 | 6912.92 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 9/2/2022 | 20.82 | 21.25 | 0.43 | 6913.23 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 10/4/2022 | 20.84 | 21.30 | 0.46 | 6913.18 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 11/3/2022 | 21.04 | 21.42 | 0.38 | 6913.06 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-62 | 12/6/2022 | 20.95 | 21.37 | 0.42 | 6913.11 | 6934.73 | 6937.36 | 2.88 | 29.92 | 8.0 | 28.0 |
| OW-63 | 3/21/2018 | ND | 17.47 | NA | NA | 6932.34 | NA | 2.72 | 29.46 | 9.0 | 29.0 |
| OW-63 | 4/24/2018 | ND | 17.61 | NA | NA | 6932.34 | NA | 2.72 | 29.46 | 9.0 | 29.0 |
| OW-63 | 8/16/2018 | ND | 17.88 | NA | NA | 6932.34 | NA | 2.72 | 29.48 | 9.0 | 29.0 |
| OW-63 | 11/29/2018 | ND | 18.23 | NA | NA | 6932.34 | NA | 2.72 | 29.28 | 9.0 | 29.0 |
| OW-63 | 2/19/2019 | ND | 17.74 | NA | NA | 6932.34 | NA | 3.00 | 29.00 | 9.0 | 29.0 |
| OW-63 | 5/15/2019 | ND | 17.35 | NA | NA | 6932.34 | NA | 3.00 | 29.00 | 9.0 | 29.0 |
| OW-63 | 8/19/2019 | ND | 17.12 | NA | NA | 6932.34 | NA | 3.00 | 29.20 | 9.0 | 29.0 |
| OW-63 | 11/18/2019 | ND | 17.30 | NA | NA | 6932.34 | NA | 3.00 | 29.00 | 9.0 | 29.0 |
| OW-63 | 3/4/2020 | ND | 17.41 | NA | 6914.65 | 6932.34 | 6935.06 | 3.00 | 29.00 | 9.0 | 29.0 |
| OW-63 | 6/29/2020 | ND | 17.46 | NA | 6914.60 | 6932.34 | 6935.06 | 3.00 | 29.00 | 9.0 | 29.0 |
| OW-63 | 9/14/2020 | ND | 17.73 | NA | 6914.33 | 6932.34 | 6935.06 | 3.00 | 29.05 | 9.0 | 29.0 |
| OW-63 | 11/9/2020 | ND | 17.85 | NA | 6914.21 | 6932.34 | 6935.06 | 3.00 | 29.05 | 9.0 | 29.0 |
| OW-63 | 12/8/2020 | ND | 17.97 | NA | 6914.09 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 1/28/2021 | ND | 18.15 | NA | 6913.91 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 2/27/2021 | ND | 18.13 | NA | 6913.93 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 3/31/2021 | ND | 18.28 | NA | 6913.78 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 4/26/2021 | ND | 18.40 | NA | 6913.66 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 5/20/2021 | ND | 18.52 | NA | 6913.54 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 6/2/2021 | ND | 18.37 | NA | 6913.69 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 9/28/2021 | ND | 18.85 | NA | 6913.21 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 12/16/2021 | ND | 18.93 | NA | 6913.13 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 1/10/2022 | ND | 18.89 | NA | 6913.17 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 2/28/2022 | ND | 18.93 | NA | 6913.13 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 3/1/2022 | ND | 18.95 | NA | 6913.11 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 4/27/2022 | ND | 19.22 | NA | 6912.84 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 5/9/2022 | ND | 19.29 | NA | 6912.77 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 6/1/2022 | ND | 19.51 | NA | 6912.55 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 7/7/2022 | ND | 18.51 | NA | 6913.55 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 8/9/2022 | ND | 18.77 | NA | 6913.29 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 9/2/2022 | ND | 19.25 | NA | 6912.81 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 10/4/2022 | ND | 19.42 | NA | 6912.64 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 11/3/2022 | ND | 19.39 | NA | 6912.67 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-63 | 12/6/2022 | ND | 20.02 | NA | 6912.04 | 6932.34 | 6935.06 | 3.00 | 29.22 | 9.0 | 29.0 |
| OW-64 | 3/21/2018 | ND | 5.39 | NA | NA | 6945.07 | NA | 2.33 | 25.29 | 4.0 | 24.0 |
| OW-64 | 4/24/2018 | ND | 5.52 | NA | NA | 6945.07 | NA | 2.33 | 25.30 | 4.0 | 24.0 |
| OW-64 | 8/16/2018 | ND | 5.18 | NA | NA | 6945.07 | NA | 2.33 | 25.02 | 4.0 | 24.0 |
| OW-64 | 11/29/2018 | 5.73 | 5.78 | 0.05 | NA | 6945.07 | NA | 2.33 | 25.02 | 4.0 | 24.0 |
| OW-64 | 2/19/2019 | 4.23 | 4.25 | 0.02 | NA | 6945.07 | NA | 2.77 | 24.86 | 4.0 | 24.0 |
| OW-64 | 5/15/2019 | ND | 4.06 | NA | NA | 6945.07 | NA | 2.77 | 24.86 | 4.0 | 24.0 |
| OW-64 | 8/19/2019 | ND | 4.33 | NA | NA | 6945.07 | NA | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 11/18/2019 | ND | 5.63 | NA | NA | 6945.07 | NA | 2.77 | 24.58 | 4.0 | 24.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-64 | 3/4/2020 | ND | 4.73 | NA | 6939.90 | 6945.07 | 6947.40 | 2.77 | 24.86 | 4.0 | 24.0 |
| OW-64 | 6/30/2020 | ND | 5.58 | NA | 6939.05 | 6945.07 | 6947.40 | 2.77 | 24.86 | 4.0 | 24.0 |
| OW-64 | 9/14/2020 | ND | 5.18 | NA | 6939.45 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 11/9/2020 | ND | 5.41 | NA | 6939.22 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 12/7/2020 | ND | 5.49 | NA | 6939.14 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 1/28/2021 | ND | 5.77 | NA | 6938.86 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 2/27/2021 | ND | 5.52 | NA | 6939.11 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 3/31/2021 | ND | 5.60 | NA | 6939.03 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 4/26/2021 | ND | 5.51 | NA | 6939.12 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 5/20/2021 | ND | 5.31 | NA | 6939.32 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 6/2/2021 | ND | 5.73 | NA | 6938.90 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 9/9/2021 | ND | 5.17 | NA | 6939.46 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 12/28/2021 | ND | 4.98 | NA | 6939.65 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 1/10/2022 | ND | 5.03 | NA | 6939.60 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 2/28/2022 | ND | 5.25 | NA | 6939.38 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 3/2/2022 | ND | 4.96 | NA | 6939.67 | 6945.07 | 6947.40 | 2.77 | 24.63 | 4.0 | 24.0 |
| OW-64 | 4/27/2022 | ND | 5.90 | NA | 6938.73 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 5/9/2022 | ND | 5.78 | NA | 6938.85 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 6/1/2022 | ND | 5.37 | NA | 6939.26 | 6945.07 | 6947.40 | 2.77 | 21.53 | 4.0 | 24.0 |
| OW-64 | 7/7/2022 | ND | 5.34 | NA | 6939.29 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 8/9/2022 | ND | 5.03 | NA | 6939.60 | 6945.07 | 6947.40 | 2.77 | 24.58 | 4.0 | 24.0 |
| OW-64 | 9/2/2022 | ND | 5.43 | NA | 6939.20 | 6945.07 | 6947.40 | 2.77 | 21.53 | 4.0 | 24.0 |
| OW-64 | 10/4/2022 | ND | 5.75 | NA | 6938.88 | 6945.07 | 6947.40 | 2.77 | 21.53 | 4.0 | 24.0 |
| OW-64 | 11/3/2022 | ND | 5.91 | NA | 6938.72 | 6945.07 | 6947.40 | 2.77 | 21.53 | 4.0 | 24.0 |
| OW-64 | 12/6/2022 | ND | 5.20 | NA | 6939.43 | 6945.07 | 6947.40 | 2.77 | 21.53 | 4.0 | 24.0 |
| OW-65 | 3/21/2018 | 20.97 | 21.17 | 0.20 | NA | 6951.62 | NA | 2.43 | 39.23 | 17.0 | 37.0 |
| OW-65 | 4/24/2018 | 21.18 | 23.92 | 2.74 | NA | 6951.62 | NA | 2.43 | 39.22 | 17.0 | 37.0 |
| OW-65 | 8/16/2018 | 22.53 | 24.21 | 1.68 | NA | 6951.62 | NA | 2.43 | 39.23 | 17.0 | 37.0 |
| OW-65 | 11/29/2018 | 21.62 | 29.37 | 7.75 | NA | 6951.62 | NA | 2.43 | 37.57 | 17.0 | 37.0 |
| OW-65 | 2/19/2019 | 19.36 | 28.63 | 9.27 | NA | 6951.62 | NA | 2.88 | 37.12 | 17.0 | 37.0 |
| OW-65 | 5/15/2019 | 20.59 | 29.33 | 8.74 | NA | 6951.62 | NA | 2.88 | 37.12 | 17.0 | 37.0 |
| OW-65 | 8/20/2019 | 19.09 | 28.27 | 9.18 | NA | 6951.62 | NA | 2.88 | 38.78 | 17.0 | 37.0 |
| OW-65 | 3/4/2020 | 20.95 | 27.20 | 6.25 | 6923.97 | 6951.62 | 6954.05 | 2.88 | 37.12 | 17.0 | 37.0 |
| OW-65 | 6/29/2020 | 21.20 | 28.53 | 7.33 | 6922.64 | 6951.62 | 6954.05 | 2.88 | 37.12 | 17.0 | 37.0 |
| OW-65 | 9/14/2020 | 21.82 | 27.88 | 6.06 | 6923.29 | 6951.62 | 6954.05 | 2.88 | 39.92 | 17.0 | 37.0 |
| OW-65 | 11/9/2020 | 22.17 | 29.47 | 7.30 | 6921.70 | 6951.62 | 6954.05 | 2.88 | 39.92 | 17.0 | 37.0 |
| OW-65 | 12/8/2020 | 22.91 | 29.07 | 6.16 | 6922.10 | 6951.62 | 6954.05 | 2.88 | 39.62 | 17.0 | 37.0 |
| OW-65 | 1/28/2021 | 23.75 | 28.87 | 5.12 | 6922.30 | 6951.62 | 6954.05 | 2.88 | 39.62 | 17.0 | 37.0 |
| OW-65 | 2/27/2021 | 23.53 | 30.83 | 7.30 | 6920.34 | 6951.62 | 6954.05 | 2.88 | 38.87 | 17.0 | 37.0 |
| OW-65 | 3/31/2021 | 24.52 | 31.00 | 6.48 | 6920.17 | 6951.62 | 6954.05 | 2.88 | 38.12 | 17.0 | 37.0 |
| OW-65 | 4/26/2021 | 25.13 | 31.07 | 5.94 | 6920.10 | 6951.62 | 6954.05 | 2.88 | 37.37 | 17.0 | 37.0 |
| OW-65 | 5/20/2021 | 25.28 | 32.29 | 7.01 | 6918.88 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 6/2/2021 | 24.03 | 29.78 | 5.75 | 6921.39 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 9/7/2021 | 25.49 | 31.62 | 6.13 | 6919.55 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 12/2/2021 | 25.22 | 32.20 | 6.98 | 6918.97 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 1/10/2022 | 25.24 | 32.23 | 6.99 | 6918.94 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 2/28/2022 | 25.23 | 32.21 | 6.98 | 6918.96 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 3/2/2022 | 25.20 | 32.13 | 6.93 | 6919.04 | 6951.62 | 6954.05 | 2.88 | 36.63 | 17.0 | 37.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-65 | 4/5/2022 | 26.97 | 31.82 | 4.85 | 6919.35 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 5/9/2022 | 27.21 | 32.90 | 5.69 | 6918.27 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 6/2/2022 | 25.09 | 32.05 | 6.96 | 6919.12 | 6951.62 | 6954.05 | 2.88 | 36.63 | 17.0 | 37.0 |
| OW-65 | 7/7/2022 | 28.64 | 30.17 | 1.53 | 6921.00 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 8/9/2022 | 28.95 | 29.49 | 0.54 | 6921.68 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 9/5/2022 | 29.20 | 29.56 | 0.36 | 6921.61 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 10/4/2022 | 29.29 | 29.56 | 0.27 | 6921.61 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 11/3/2022 | 29.27 | 29.50 | 0.23 | 6921.67 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-65 | 12/6/2022 | 29.54 | 29.76 | 0.22 | 6921.41 | 6951.62 | 6954.05 | 2.88 | 36.62 | 17.0 | 37.0 |
| OW-66 | 9/2/2021 | ND | 15.66 | NA | 6904.14 | 6919.80 | 6922.35 | 2.55 | NA | 10.0 | 25.0 |
| OW-66 | 12/1/2021 | ND | 15.30 | NA | 6904.50 | 6919.80 | 6922.35 | 2.55 | NA | 10.0 | 25.0 |
| OW-66 | 3/2/2022 | ND | 15.19 | NA | 6904.61 | 6919.80 | 6922.35 | 2.55 | 25.26 | 10.0 | 25.0 |
| OW-66 | 6/2/2022 | ND | 15.66 | NA | 6904.14 | 6919.80 | 6922.35 | 2.55 | 25.20 | 10.0 | 25.0 |
| OW-66 | 9/7/2022 | ND | 16.26 | NA | 6903.54 | 6919.80 | 6922.35 | 2.55 | 25.20 | 10.0 | 25.0 |
| OW-66 | 10/4/2022 | ND | 16.08 | NA | 6903.72 | 6919.80 | 6922.35 | 2.55 | 25.20 | 10.0 | 25.0 |
| OW-66 | 11/3/2022 | ND | 16.15 | NA | 6903.65 | 6919.80 | 6922.35 | 2.55 | 25.20 | 10.0 | 25.0 |
| OW-66 | 12/27/2022 | ND | 16.45 | NA | 6903.35 | 6919.80 | 6922.35 | 2.55 | 25.20 | 10.0 | 25.0 |
| OW-67 | 9/2/2021 | ND | 9.84 | NA | 6890.89 | 6900.73 | 6903.29 | 2.56 | NA | 10.0 | 25.0 |
| OW-67 | 12/22/2021 | ND | 9.84 | NA | 6890.89 | 6900.73 | 6903.29 | 2.56 | NA | 10.0 | 25.0 |
| OW-67 | 6/2/2022 | ND | 9.90 | NA | 6890.83 | 6900.73 | 6903.29 | 2.56 | 24.87 | 10.0 | 25.0 |
| OW-67 | 9/2/2022 | ND | 10.03 | NA | 6890.70 | 6900.73 | 6903.29 | 2.56 | 24.87 | 10.0 | 25.0 |
| OW-67 | 10/4/2022 | ND | 10.34 | NA | 6890.39 | 6900.73 | 6903.29 | 2.56 | 24.87 | 10.0 | 25.0 |
| OW-67 | 11/3/2022 | ND | 10.32 | NA | 6890.41 | 6900.73 | 6903.29 | 2.56 | 24.87 | 10.0 | 25.0 |
| OW-67 | 12/28/2022 | ND | 10.14 | NA | 6890.59 | 6900.73 | 6903.29 | 2.56 | 24.89 | 10.0 | 25.0 |
| OW-68 | 9/2/2021 | ND | 11.39 | NA | 6877.29 | 6888.68 | 6891.51 | 2.83 | NA | 5.0 | 25.0 |
| OW-68 | 12/22/2021 | ND | 11.27 | NA | 6877.41 | 6888.68 | 6891.51 | 2.83 | NA | 5.0 | 25.0 |
| OW-68 | 6/2/2022 | ND | 11.35 | NA | 6877.33 | 6888.68 | 6891.51 | 2.83 | 25.37 | 5.0 | 25.0 |
| OW-68 | 9/2/2022 | ND | 15.69 | NA | 6872.99 | 6888.68 | 6891.51 | 2.83 | 25.37 | 5.0 | 25.0 |
| OW-68 | 10/5/2022 | ND | 15.87 | NA | 6872.81 | 6888.68 | 6891.51 | 2.83 | 25.37 | 5.0 | 25.0 |
| OW-68 | 11/3/2022 | ND | 15.98 | NA | 6872.70 | 6888.68 | 6891.51 | 2.83 | 25.37 | 5.0 | 25.0 |
| OW-68 | 12/28/2022 | ND | 15.83 | NA | 6872.85 | 6888.68 | 6891.51 | 2.83 | 25.37 | 5.0 | 25.0 |
| OW-70 | 9/8/2021 | ND | 0.53 | NA | 6942.54 | 6943.07 | 6945.95 | 2.88 | 44.82 | 25.0 | 44.7 |
| OW-70 | 12/16/2021 | ND | 28.71 | NA | 6914.36 | 6943.07 | 6945.95 | 2.88 | 44.82 | 25.0 | 44.7 |
| OW-70 | 3/2/2022 | ND | 28.76 | NA | 6914.31 | 6943.07 | 6945.95 | 2.88 | 44.83 | 25.0 | 44.7 |
| OW-70 | 6/1/2022 | ND | 29.24 | NA | 6913.83 | 6943.07 | 6945.95 | 2.88 | 44.84 | 25.0 | 44.7 |
| OW-70 | 9/7/2022 | ND | 29.41 | NA | 6913.66 | 6943.07 | 6945.95 | 2.88 | 44.84 | 25.0 | 44.7 |
| OW-70 | 10/5/2022 | ND | 29.53 | NA | 6913.54 | 6943.07 | 6945.95 | 2.88 | 44.84 | 25.0 | 44.7 |
| OW-70 | 11/2/2022 | ND | 29.62 | NA | 6913.45 | 6943.07 | 6945.95 | 2.88 | 44.84 | 25.0 | 44.7 |
| OW-70 | 12/14/2022 | ND | 29.07 | NA | 6914.00 | 6943.07 | 6945.95 | 2.88 | 44.84 | 25.0 | 44.7 |
| RW-1 | 3/14/2014 | 24.91 | 28.45 | 3.54 | 6914.41 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 6/9/2014 | 24.85 | 29.86 | 5.01 | 6913.00 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 9/18/2014 | 25.11 | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 11/13/2014 | 24.95 | 29.84 | 4.89 | 6913.02 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 3/23/2015 | 24.90 | 29.60 | 4.70 | 6913.26 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 6/9/2015 | 24.50 | 28.90 | 4.40 | 6913.96 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 8/23/2015 | 24.88 | 26.82 | 1.94 | 6916.04 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 10/29/2015 | 24.45 | 26.90 | 2.45 | 6915.96 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 3/4/2016 | 24.85 | 27.35 | 2.50 | 6915.51 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| RW-1 | 6/8/2016 | 24.78 | 28.60 | 3.82 | 6914.26 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 9/13/2016 | 24.70 | 28.84 | 4.14 | 6914.02 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 11/16/2016 | 24.60 | 27.70 | 3.10 | 6915.16 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 3/16/2017 | 23.85 | 27.35 | 3.50 | 6915.51 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 6/20/2017 | 23.57 | 25.22 | 1.65 | 6917.64 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 9/19/2017 | 23.32 | 24.40 | 1.08 | 6918.46 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 12/12/2017 | 23.30 | 24.30 | 1.00 | 6918.56 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 2/13/2018 | 23.74 | 24.02 | 0.28 | 6918.84 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 4/25/2018 | 23.74 | 24.01 | 0.27 | 6918.85 | 6942.86 | 6946.06 | 3.20 | 40.15 | 25.0 | 40.0 |
| RW-1 | 8/16/2018 | 24.24 | 24.50 | 0.26 | 6918.36 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 11/7/2018 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 3/28/2019 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 5/8/2019 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 8/16/2019 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 11/1/2019 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 3/4/2020 | NA | NA | NA | NA | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 6/30/2020 | 25.05 | 26.30 | 1.25 | 6916.56 | 6942.86 | 6946.06 | 3.20 | 39.84 | 25.0 | 40.0 |
| RW-1 | 9/19/2020 | 24.87 | 27.00 | 2.13 | 6915.86 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 11/10/2020 | 26.30 | 27.13 | 0.83 | 6915.73 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 12/8/2020 | 26.30 | 27.13 | 0.83 | 6915.73 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 1/28/2021 | 26.78 | 27.13 | 0.35 | 6915.73 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 2/27/2021 | 26.55 | 27.85 | 1.30 | 6915.01 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 3/31/2021 | 26.70 | 28.81 | 2.11 | 6914.05 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 4/26/2021 | 26.61 | 28.69 | 2.08 | 6914.17 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 5/20/2021 | 26.85 | 30.03 | 3.18 | 6912.83 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 6/1/2021 | 27.13 | 30.22 | 3.09 | 6912.64 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 9/9/2021 | 26.33 | 27.82 | 1.49 | 6915.04 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 12/2/2021 | 26.71 | 28.78 | 2.07 | 6914.08 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 1/10/2022 | 26.92 | 34.92 | 8.00 | 6907.94 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 2/28/2022 | 27.00 | 34.98 | 7.98 | 6907.88 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 3/2/2022 | 26.81 | 28.83 | 2.02 | 6914.03 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 4/27/2022 | 27.39 | 27.64 | 0.25 | 6915.22 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 5/9/2022 | 27.56 | 27.97 | 0.41 | 6914.89 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 6/2/2022 | 27.78 | 27.90 | 0.12 | 6914.96 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 7/7/2022 | 27.98 | 28.07 | 0.09 | 6914.79 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 8/9/2022 | 28.17 | 28.23 | 0.06 | 6914.63 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 9/5/2022 | 28.31 | 28.34 | 0.03 | 6914.52 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 10/5/2022 | 28.37 | 28.39 | 0.02 | 6914.47 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 11/2/2022 | 28.50 | 28.52 | 0.02 | 6914.34 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-1 | 12/9/2022 | 28.47 | 28.69 | 0.22 | 6914.17 | 6942.86 | 6946.06 | 3.20 | 40.25 | 25.0 | 40.0 |
| RW-2 | 3/17/2014 | ND | 22.46 | NA | 6903.94 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 6/9/2014 | ND | 21.66 | NA | 6904.74 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 9/18/2014 | ND | 21.82 | NA | 6904.58 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 11/13/2014 | ND | 21.77 | NA | 6904.63 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 3/23/2015 | ND | 21.39 | NA | 6905.01 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 6/9/2015 | ND | 20.89 | NA | 6905.51 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 8/23/2015 | ND | 21.24 | NA | 6905.16 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 10/29/2015 | ND | 20.67 | NA | 6905.73 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| RW-2 | 3/4/2016 | ND | 20.32 | NA | 6906.08 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 6/8/2016 | ND | 20.18 | NA | 6906.22 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 9/13/2016 | ND | 20.34 | NA | 6906.06 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 11/16/2016 | ND | 20.09 | NA | 6906.31 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 3/16/2017 | ND | 19.52 | NA | 6906.88 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 6/20/2017 | ND | 19.06 | NA | 6907.34 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 9/19/2017 | ND | 18.58 | NA | 6907.82 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 12/5/2017 | ND | 18.21 | NA | 6908.19 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 2/19/2018 | ND | 17.87 | NA | 6908.53 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 4/25/2018 | ND | 17.90 | NA | 6908.50 | 6926.40 | 6928.53 | 2.13 | 37.86 | 26.1 | 36.1 |
| RW-2 | 8/16/2018 | ND | 17.97 | NA | 6908.43 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 11/7/2018 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 3/28/2019 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 5/8/2019 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 8/16/2019 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 11/1/2019 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 3/4/2020 | NA | NA | NA | NA | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 6/30/2020 | 18.53 | 18.87 | 0.34 | 6907.53 | 6926.40 | 6928.53 | 2.13 | 37.67 | 26.1 | 36.1 |
| RW-2 | 9/19/2020 | 19.97 | 20.10 | 0.13 | 6906.30 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 11/9/2020 | 19.96 | 20.15 | 0.19 | 6906.25 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 12/8/2020 | 20.07 | 20.25 | 0.18 | 6906.15 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 1/28/2021 | ND | 20.27 | NA | 6906.13 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 2/27/2021 | 20.27 | 20.32 | 0.05 | 6906.08 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 3/31/2021 | 20.57 | 20.72 | 0.15 | 6905.68 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 4/26/2021 | 20.92 | 21.06 | 0.14 | 6905.34 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 5/20/2021 | 21.64 | 21.73 | 0.09 | 6904.67 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2 | 6/1/2021 | 21.64 | 21.73 | 0.09 | 6904.67 | 6926.40 | 6928.53 | 2.13 | 37.87 | 26.1 | 36.1 |
| RW-2R | 9/9/2021 | 19.09 | 21.75 | 2.66 | 6909.29 | 6931.04 | 6934.21 | 3.17 | NA | 11.5 | 31.5 |
| RW-2R | 12/2/2021 | 19.33 | 21.72 | 2.39 | 6909.32 | 6931.04 | 6934.21 | 3.17 | NA | 11.5 | 31.5 |
| RW-2R | 1/10/2022 | 19.03 | 21.43 | 2.40 | 6909.61 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 2/28/2022 | 19.09 | 21.45 | 2.36 | 6909.59 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 3/2/2022 | 19.27 | 21.67 | 2.40 | 6909.37 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 4/27/2022 | 19.67 | 21.99 | 2.32 | 6909.05 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 5/9/2022 | 19.81 | 22.18 | 2.37 | 6908.86 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 6/2/2022 | 20.03 | 22.38 | 2.35 | 6908.66 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 7/7/2022 | 20.34 | 22.60 | 2.26 | 6908.44 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 8/9/2022 | 20.52 | 22.80 | 2.28 | 6908.24 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 9/5/2022 | 20.80 | 23.03 | 2.23 | 6908.01 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 10/5/2022 | 20.99 | 23.12 | 2.13 | 6907.92 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 11/2/2022 | 21.11 | 23.29 | 2.18 | 6907.75 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-2R | 12/9/2022 | 21.10 | 23.28 | 2.18 | 6907.76 | 6931.04 | 6934.21 | 3.17 | 28.33 | 11.5 | 31.5 |
| RW-5 | 3/14/2014 | ND | 25.88 | NA | 6915.65 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 6/9/2014 | ND | 26.76 | NA | 6914.77 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 9/18/2014 | ND | 26.77 | NA | 6914.76 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 11/13/2014 | ND | 26.66 | NA | 6914.87 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 3/23/2015 | ND | 27.06 | NA | 6914.47 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 6/9/2015 | ND | 26.76 | NA | 6914.77 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 8/23/2015 | ND | 27.04 | NA | 6914.49 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| RW-5 | 10/29/2015 | ND | 25.93 | NA | 6915.60 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 3/4/2016 | ND | 26.18 | NA | 6915.35 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 6/7/2016 | ND | 26.18 | NA | 6915.35 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 9/13/2016 | ND | 25.66 | NA | 6915.87 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 11/16/2016 | ND | 25.36 | NA | 6916.17 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 3/16/2017 | ND | 25.49 | NA | 6916.04 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 6/20/2017 | 23.26 | 31.26 | 8.00 | 6910.27 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 9/19/2017 | 23.42 | 29.61 | 6.19 | 6911.92 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 12/12/2017 | 22.71 | 31.96 | 9.25 | 6909.57 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 2/9/2018 | 23.46 | 31.56 | 8.10 | 6909.97 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 4/25/2018 | 24.58 | 30.30 | 5.72 | 6911.23 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 8/16/2018 | 25.16 | 30.54 | 5.38 | 6910.99 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 11/7/2018 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 3/28/2019 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 5/8/2019 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 8/16/2019 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 11/1/2019 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 3/4/2020 | NA | NA | NA | NA | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 6/30/2020 | 26.61 | 30.01 | 3.40 | 6911.52 | 6941.53 | 6943.57 | 2.04 | 37.55 | 29.5 | 39.5 |
| RW-5 | 9/19/2020 | 27.55 | 30.77 | 3.22 | 6910.76 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 11/9/2020 | 27.82 | 30.99 | 3.17 | 6910.54 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 12/8/2020 | 31.11 | 37.47 | 6.36 | 6904.06 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 1/28/2021 | 30.38 | 31.94 | 1.56 | 6909.59 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 2/27/2021 | 28.98 | 29.61 | 0.63 | 6911.92 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 3/31/2021 | 28.06 | 29.55 | 1.49 | 6911.98 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 4/26/2021 | 28.39 | 29.72 | 1.33 | 6911.81 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 5/20/2021 | 28.72 | 28.86 | 0.14 | 6912.67 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 6/1/2021 | 29.16 | 29.82 | 0.66 | 6911.71 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 9/9/2021 | 28.30 | 31.40 | 3.10 | 6910.13 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 12/2/2021 | 28.27 | 30.64 | 2.37 | 6910.89 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 1/10/2022 | 28.11 | 30.47 | 2.36 | 6911.06 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 2/28/2022 | 28.06 | 30.44 | 2.38 | 6911.09 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 3/2/2022 | 28.26 | 30.61 | 2.35 | 6910.92 | 6941.53 | 6943.57 | 2.04 | 37.46 | 29.5 | 39.5 |
| RW-5 | 4/27/2022 | 28.60 | 30.99 | 2.39 | 6910.54 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 5/9/2022 | 28.75 | 31.22 | 2.47 | 6910.31 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 6/2/2022 | 28.92 | 31.14 | 2.22 | 6910.39 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 7/7/2022 | 29.13 | 31.52 | 2.39 | 6910.01 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 8/9/2022 | 29.24 | 31.49 | 2.25 | 6910.04 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 9/5/2022 | 29.36 | 31.49 | 2.13 | 6910.04 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 10/5/2022 | 29.45 | 31.44 | 1.99 | 6910.09 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 11/2/2022 | 29.53 | 31.43 | 1.90 | 6910.10 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-5 | 12/9/2022 | 29.51 | 31.29 | 1.78 | 6910.24 | 6941.53 | 6943.57 | 2.04 | 37.47 | 29.5 | 39.5 |
| RW-6 | 3/17/2014 | ND | 25.99 | NA | 6915.97 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 6/23/2014 | ND | 26.80 | NA | 6915.16 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 9/18/2014 | ND | 26.84 | NA | 6915.12 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 11/13/2014 | ND | 26.78 | NA | 6915.18 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 3/23/2015 | ND | 27.13 | NA | 6914.83 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 6/9/2015 | ND | 26.63 | NA | 6915.33 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| RW-6 | 8/23/2015 | ND | 27.01 | NA | 6914.95 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 10/29/2015 | ND | 25.92 | NA | 6916.04 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 3/4/2016 | ND | 26.20 | NA | 6915.76 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 6/7/2016 | ND | 26.19 | NA | 6915.77 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 9/13/2016 | ND | 25.94 | NA | 6916.02 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 11/16/2016 | ND | 25.67 | NA | 6916.29 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 3/16/2017 | ND | 25.52 | NA | 6916.44 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 6/20/2017 | 23.45 | 31.57 | 8.12 | 6910.39 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 9/19/2017 | 23.84 | 28.92 | 5.08 | 6913.04 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 12/12/2017 | 22.78 | 31.80 | 9.02 | 6910.16 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 2/9/2018 | 23.60 | 31.00 | 7.40 | 6910.96 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 4/25/2018 | 24.88 | 29.64 | 4.76 | 6912.32 | 6941.96 | 6944.01 | 2.05 | 38.78 | 28.5 | 38.5 |
| RW-6 | 8/16/2018 | 25.38 | 29.73 | 4.35 | 6912.23 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 11/7/2018 | NA | NA | NA | NA | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 3/28/2019 | NA | NA | NA | NA | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 5/8/2019 | NA | NA | NA | NA | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 8/16/2019 | NA | NA | NA | NA | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 3/4/2020 | NA | NA | NA | NA | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 6/30/2020 | 26.82 | 28.45 | 1.63 | 6913.51 | 6941.96 | 6944.01 | 2.05 | 38.85 | 28.5 | 38.5 |
| RW-6 | 9/19/2020 | 27.67 | 30.59 | 2.92 | 6911.37 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 11/9/2020 | 27.93 | 31.00 | 3.07 | 6910.96 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 12/8/2020 | 28.13 | 31.26 | 3.13 | 6910.70 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 1/28/2021 | 28.17 | 31.07 | 2.90 | 6910.89 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 2/27/2021 | 28.40 | 31.58 | 3.18 | 6910.38 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 3/31/2021 | 29.55 | 29.65 | 0.10 | 6912.31 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 4/26/2021 | 29.53 | 29.56 | 0.03 | 6912.40 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 5/20/2021 | 29.56 | 29.59 | 0.03 | 6912.37 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 6/1/2021 | 30.06 | 30.19 | 0.13 | 6911.77 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 9/9/2021 | 28.29 | 31.39 | 3.10 | 6910.57 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 12/2/2021 | 28.35 | 31.10 | 2.75 | 6910.86 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 1/10/2022 | 28.17 | 31.05 | 2.88 | 6910.91 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 2/28/2022 | 28.23 | 30.95 | 2.72 | 6911.01 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 3/2/2022 | 28.33 | 31.06 | 2.73 | 6910.90 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 4/27/2022 | 28.93 | 30.47 | 1.54 | 6911.49 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 5/9/2022 | 29.11 | 30.65 | 1.54 | 6911.31 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 6/2/2022 | 28.30 | 30.95 | 2.65 | 6911.01 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 7/7/2022 | 29.42 | 31.20 | 1.78 | 6910.76 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 8/9/2022 | 29.51 | 31.35 | 1.84 | 6910.61 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 9/5/2022 | 29.59 | 31.52 | 1.93 | 6910.44 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 10/5/2022 | 29.68 | 31.53 | 1.85 | 6910.43 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 11/2/2022 | 29.76 | 31.54 | 1.78 | 6910.42 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| RW-6 | 12/9/2022 | 29.70 | 31.48 | 1.78 | 6910.48 | 6941.96 | 6944.01 | 2.05 | 38.80 | 28.5 | 38.5 |
| SMW-2 | 9/11/2014 | ND | 22.76 | NA | 6858.87 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 8/10/2015 | ND | 22.54 | NA | 6859.09 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 9/9/2016 | ND | 22.50 | NA | 6859.13 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 9/11/2017 | ND | 22.45 | NA | 6859.18 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 8/15/2018 | ND | 22.15 | NA | 6859.48 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 8/19/2019 | ND | 22.96 | NA | 6858.67 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| SMW-2 | 6/30/2020 | ND | 21.91 | NA | 6859.72 | 6881.63 | 6883.97 | 2.34 | 50.46 | 34.3 | 54.3 |
| SMW-2 | 9/14/2020 | ND | 22.36 | NA | 6859.27 | 6881.63 | 6883.97 | 2.34 | 50.77 | 34.3 | 54.3 |
| SMW-2 | 9/29/2021 | ND | 22.21 | NA | 6859.42 | 6881.63 | 6883.97 | 2.34 | 50.77 | 34.3 | 54.3 |
| SMW-2 | 9/2/2022 | ND | 22.33 | NA | 6859.30 | 6881.63 | 6883.97 | 2.34 | 50.64 | 34.3 | 54.3 |
| SMW-2 | 10/5/2022 | ND | 22.31 | NA | 6859.32 | 6881.63 | 6883.97 | 2.34 | 50.64 | 34.3 | 54.3 |
| SMW-4 | 9/11/2014 | ND | 27.21 | NA | 6850.42 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 8/10/2015 | ND | 27.43 | NA | 6850.20 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 9/6/2016 | ND | 27.11 | NA | 6850.52 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 9/11/2017 | ND | 27.44 | NA | 6850.19 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 8/15/2018 | ND | 27.15 | NA | 6850.48 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 12/6/2018 | ND | 27.36 | NA | 6850.27 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 8/13/2019 | ND | 27.21 | NA | 6850.42 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 6/30/2020 | ND | 27.28 | NA | 6850.35 | 6877.63 | 6879.52 | 1.89 | 67.79 | 51.7 | 71.7 |
| SMW-4 | 9/14/2020 | ND | 27.26 | NA | 6850.37 | 6877.63 | 6879.52 | 1.89 | 61.01 | 51.7 | 71.7 |
| SMW-4 | 9/28/2021 | ND | 27.19 | NA | 6850.44 | 6877.63 | 6879.52 | 1.89 | 61.01 | 51.7 | 71.7 |
| SMW-4 | 9/2/2022 | ND | 26.14 | NA | 6851.49 | 6877.63 | 6879.52 | 1.89 | 63.76 | 51.7 | 71.7 |
| SMW-4 | 10/5/2022 | ND | 26.11 | NA | 6851.52 | 6877.63 | 6879.52 | 1.89 | 63.76 | 51.7 | 71.7 |
| STP1-NW | 3/10/2015 | ND | 20.77 | NA | 6883.73 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 6/2/2015 | ND | 20.75 | NA | 6883.75 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 8/11/2015 | ND | 20.82 | NA | 6883.68 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 10/29/2015 | ND | 20.63 | NA | 6883.87 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 3/1/2016 | ND | 20.58 | NA | 6883.92 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 6/7/2016 | ND | 20.92 | NA | 6883.58 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 9/9/2016 | ND | 21.23 | NA | 6883.27 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 11/14/2016 | ND | 21.05 | NA | 6883.45 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 2/21/2017 | ND | 20.50 | NA | 6884.00 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 6/2/2017 | ND | 20.69 | NA | 6883.81 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 9/5/2017 | ND | 20.84 | NA | 6883.66 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 12/4/2017 | ND | 20.58 | NA | 6883.92 | 6904.50 | 6904.47 | -0.03 | 49.77 | 20.0 | 50.0 |
| STP1-NW | 2/9/2018 | ND | 20.58 | NA | 6883.92 | 6904.50 | 6904.47 | -0.03 | 49.76 | 20.0 | 50.0 |
| STP1-NW | 4/26/2018 | ND | 20.67 | NA | 6883.83 | 6904.50 | 6904.47 | -0.03 | 49.68 | 20.0 | 50.0 |
| STP1-NW | 8/15/2018 | ND | 20.95 | NA | 6883.55 | 6904.50 | 6904.47 | -0.03 | 49.81 | 20.0 | 50.0 |
| STP1-NW | 11/19/2018 | NA | NA | NA | NA | 6904.50 | 6904.47 | -0.03 | 49.81 | 20.0 | 50.0 |
| STP1-NW | 2/13/2019 | ND | 20.38 | NA | 6884.12 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 5/8/2019 | ND | 19.57 | NA | 6884.93 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 8/21/2019 | ND | 20.82 | NA | 6883.68 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 10/22/2019 | ND | 20.79 | NA | 6883.71 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 3/3/2020 | ND | 20.30 | NA | 6884.20 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 6/30/2020 | ND | 20.70 | NA | 6883.80 | 6904.50 | 6904.47 | -0.03 | 50.03 | 20.0 | 50.0 |
| STP1-NW | 12/8/2020 | ND | 20.81 | NA | 6883.69 | 6904.50 | 6904.47 | -0.03 | 50.31 | 20.0 | 50.0 |
| STP1-NW | 1/28/2021 | ND | 20.79 | NA | 6883.71 | 6904.50 | 6904.47 | -0.03 | 50.59 | 20.0 | 50.0 |
| STP1-NW | 2/28/2021 | ND | 20.63 | NA | 6883.87 | 6904.50 | 6904.47 | -0.03 | 49.88 | 20.0 | 50.0 |
| STP1-NW | 3/31/2021 | ND | 21.98 | NA | 6882.52 | 6904.50 | 6904.47 | -0.03 | 49.17 | 20.0 | 50.0 |
| STP1-NW | 4/26/2021 | ND | 20.84 | NA | 6883.66 | 6904.50 | 6904.47 | -0.03 | 48.46 | 20.0 | 50.0 |
| STP1-NW | 5/20/2021 | ND | 22.22 | NA | 6882.28 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 6/3/2021 | ND | 22.19 | NA | 6882.31 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 9/8/2021 | ND | 21.78 | NA | 6882.72 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 12/13/2021 | ND | 21.55 | NA | 6882.95 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| STP1-NW | 1/10/2022 | ND | 20.97 | NA | 6883.53 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 2/28/2022 | ND | 21.12 | NA | 6883.38 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 3/1/2022 | ND | 21.58 | NA | 6882.92 | 6904.50 | 6904.47 | -0.03 | 47.73 | 20.0 | 50.0 |
| STP1-NW | 4/27/2022 | ND | 22.90 | NA | 6881.60 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 5/5/2022 | ND | 22.70 | NA | 6881.80 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 6/2/2022 | ND | 21.30 | NA | 6883.20 | 6904.50 | 6904.47 | -0.03 | 49.52 | 20.0 | 50.0 |
| STP1-NW | 7/7/2022 | ND | 24.69 | NA | 6879.81 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 8/9/2022 | ND | 24.22 | NA | 6880.28 | 6904.50 | 6904.47 | -0.03 | 47.75 | 20.0 | 50.0 |
| STP1-NW | 9/2/2022 | ND | 20.87 | NA | 6883.63 | 6904.50 | 6904.47 | -0.03 | 49.53 | 20.0 | 50.0 |
| STP1-NW | 10/5/2022 | ND | 21.16 | NA | 6883.34 | 6904.50 | 6904.47 | -0.03 | 49.53 | 20.0 | 50.0 |
| STP1-NW | 11/2/2022 | ND | 21.29 | NA | 6883.21 | 6904.50 | 6904.47 | -0.03 | 49.53 | 20.0 | 50.0 |
| STP1-NW | 12/11/2022 | ND | 20.78 | NA | 6883.72 | 6904.50 | 6904.47 | -0.03 | 49.53 | 20.0 | 50.0 |
| STP1-NW | 12/15/2022 | ND | 21.28 | NA | 6883.22 | 6904.50 | 6904.47 | -0.03 | 49.53 | 20.0 | 50.0 |
| STP1-SW | 3/10/2015 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 6/2/2015 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 8/11/2015 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 10/29/2015 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 3/8/2016 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 6/7/2016 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 9/9/2016 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 11/14/2016 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 2/21/2017 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 6/2/2017 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 9/5/2017 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 12/4/2017 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 2/9/2018 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 4/26/2018 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 8/15/2018 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 11/19/2018 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 2/13/2019 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 5/8/2019 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 8/21/2019 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 10/22/2019 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 3/3/2020 | NA | NA | NA | NA | 6912.40 | 6912.38 | -0.02 | 29.12 | 15.0 | 30.0 |
| STP1-SW | 12/8/2020 | NA | 29.25 | NA | 6883.15 | 6912.40 | 6912.38 | -0.02 | 29.27 | 15.0 | 30.0 |
| STP1-SW | 2/28/2021 | 29.12 | 29.14 | 0.02 | 6883.26 | 6912.40 | 6912.38 | -0.02 | 29.17 | 15.0 | 30.0 |
| STP1-SW | 3/31/2021 | ND | 29.17 | NA | 6883.23 | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 4/26/2021 | ND | 28.98 | NA | 6883.42 | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 5/22/2021 | ND | 29.72 | NA | 6882.68 | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 6/3/2021 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 9/8/2021 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 12/9/2021 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 1/10/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 2/28/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 3/1/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 4/27/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 5/5/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 6/2/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|-----------------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| STP1-SW | 7/7/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 8/9/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 9/2/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 10/5/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 11/2/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| STP1-SW | 12/6/2022 | ND | Dry | NA | Dry | 6912.40 | 6912.38 | -0.02 | 29.18 | 15.0 | 30.0 |
| Sonsela Aquifer | | | | | | | | | | | |
| BW-1C | 9/10/2014 | ND | 10.46 | NA | 6872.71 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 8/10/2015 | ND | 9.82 | NA | 6873.35 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 9/8/2016 | ND | 10.04 | NA | 6873.13 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 9/13/2017 | ND | 10.09 | NA | 6873.08 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 8/15/2018 | ND | 10.39 | NA | 6872.78 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 8/14/2019 | ND | 9.88 | NA | 6873.29 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 9/14/2020 | ND | 11.38 | NA | 6871.79 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 9/28/2021 | ND | 11.97 | NA | 6871.20 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-1C | 9/2/2022 | ND | 11.27 | NA | 6871.90 | 6883.17 | 6885.68 | 2.51 | 142.78 | 125.0 | 135.0 |
| BW-2C | 9/10/2014 | ND | 18.30 | NA | 6854.60 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 8/10/2015 | ND | 18.16 | NA | 6854.74 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 9/8/2016 | ND | 18.23 | NA | 6854.67 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 9/13/2017 | ND | 18.50 | NA | 6854.40 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 8/15/2018 | ND | 18.45 | NA | 6854.45 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 8/14/2019 | ND | 18.80 | NA | 6854.10 | 6872.90 | 6875.30 | 2.40 | 150.44 | 139.5 | 149.5 |
| BW-2C | 9/14/2020 | ND | 18.92 | NA | 6853.98 | 6872.90 | 6875.30 | 2.40 | 146.70 | 139.5 | 149.5 |
| BW-2C | 9/28/2021 | ND | 18.78 | NA | 6854.12 | 6872.90 | 6875.30 | 2.40 | 146.70 | 139.5 | 149.5 |
| BW-2C | 9/27/2022 | ND | 18.80 | NA | 6854.10 | 6872.90 | 6875.30 | 2.40 | 137.60 | 139.5 | 149.5 |
| BW-3C | 9/10/2014 | ND | 5.60 | NA | 6870.12 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 8/10/2015 | ND | 5.52 | NA | 6870.20 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 9/8/2016 | ND | 6.07 | NA | 6869.65 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 9/13/2017 | ND | 5.57 | NA | 6870.15 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 8/15/2018 | ND | 5.95 | NA | 6869.77 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 8/14/2019 | ND | 5.63 | NA | 6870.09 | 6875.72 | 6877.95 | 2.23 | 152.32 | 144.5 | 154.5 |
| BW-3C | 9/14/2020 | ND | 6.29 | NA | 6869.43 | 6875.72 | 6877.95 | 2.23 | 147.97 | 144.5 | 154.5 |
| BW-3C | 9/28/2021 | ND | 6.75 | NA | 6868.97 | 6875.72 | 6877.95 | 2.23 | 147.97 | 144.5 | 154.5 |
| BW-3C | 9/27/2022 | ND | 6.37 | NA | 6869.35 | 6875.72 | 6877.95 | 2.23 | 141.77 | 144.5 | 154.5 |
| BW-5C | 9/21/2017 | ND | 0.36 | NA | 6873.86 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 12/8/2017 | ND | 0.17 | NA | 6874.05 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 2/26/2018 | ND | 0.00 | NA | 6874.22 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 4/25/2018 | ND | -0.08 | NA | 6874.30 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 8/15/2018 | ND | 0.69 | NA | 6873.53 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 11/13/2018 | ND | 0.86 | NA | 6873.36 | 6874.22 | 6876.85 | 2.63 | 73.72 | 64.3 | 74.3 |
| BW-5C | 3/27/2019 | ND | -1.02 | NA | 6874.86 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 5/21/2019 | ND | -1.41 | NA | 6875.25 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 8/15/2019 | ND | -0.32 | NA | 6874.16 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 10/16/2019 | ND | 0.49 | NA | 6873.35 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 3/5/2020 | ND | -0.21 | NA | 6874.05 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 6/26/2020 | ND | 0.37 | NA | 6873.47 | 6874.22 | 6876.85 | 3.01 | 64.34 | 64.3 | 74.3 |
| BW-5C | 9/14/2020 | ND | 1.35 | NA | 6872.49 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 12/7/2020 | ND | 1.26 | NA | 6872.58 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| BW-5C | 2/27/2021 | ND | 1.10 | NA | 6872.74 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 6/3/2021 | ND | 1.79 | NA | 6872.05 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 9/9/2021 | ND | 2.15 | NA | 6871.69 | 6874.22 | 6876.85 | 3.01 | 73.34 | 64.3 | 74.3 |
| BW-5C | 3/1/2022 | ND | 0.99 | NA | 6872.85 | 6874.22 | 6876.85 | 3.01 | 66.55 | 64.3 | 74.3 |
| BW-5C | 6/1/2022 | ND | 0.97 | NA | 6872.87 | 6874.22 | 6876.85 | 3.01 | 66.64 | 64.3 | 74.3 |
| BW-5C | 9/2/2022 | ND | 1.09 | NA | 6872.75 | 6874.22 | 6876.85 | 3.01 | 66.64 | 64.3 | 74.3 |
| BW-5C | 12/6/2022 | ND | 1.16 | NA | 6872.68 | 6874.22 | 6876.85 | 3.01 | 66.64 | 64.3 | 74.3 |
| BW-5C | 12/11/2022 | ND | 1.07 | NA | 6872.77 | 6874.22 | 6876.85 | 3.01 | 66.64 | 64.3 | 74.3 |
| MW-1 | 9/16/2014 | ND | 5.62 | NA | 6871.01 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 8/10/2015 | ND | 5.41 | NA | 6871.22 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 9/7/2016 | ND | 5.52 | NA | 6871.11 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 9/20/2017 | ND | 5.53 | NA | 6871.10 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 8/15/2018 | ND | 6.26 | NA | 6870.37 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 12/5/2018 | ND | 5.87 | NA | 6870.76 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 8/12/2019 | ND | 5.45 | NA | 6871.18 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 6/30/2020 | ND | 5.76 | NA | 6870.87 | 6876.63 | 6878.12 | 1.49 | 129.34 | 117.7 | 127.7 |
| MW-1 | 9/14/2020 | ND | 6.23 | NA | 6870.40 | 6876.63 | 6878.12 | 1.49 | 133.81 | 117.7 | 127.7 |
| MW-1 | 9/28/2021 | ND | 7.78 | NA | 6868.85 | 6876.63 | 6878.12 | 1.49 | 133.81 | 117.7 | 127.7 |
| MW-1 | 9/27/2022 | ND | 6.86 | NA | 6869.77 | 6876.63 | 6878.12 | 1.49 | 138.01 | 117.7 | 127.7 |
| MW-1 | 10/5/2022 | ND | 6.78 | NA | 6869.85 | 6876.63 | 6878.12 | 1.49 | 138.01 | 117.7 | 127.7 |
| MW-2 | 9/16/2014 | ND | 7.29 | NA | 6871.10 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 8/10/2015 | ND | 7.22 | NA | 6871.17 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 9/7/2016 | ND | 12.19 | NA | 6866.20 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 9/20/2017 | ND | 13.73 | NA | 6864.66 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 8/15/2018 | ND | 7.44 | NA | 6870.95 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 12/5/2018 | ND | 14.72 | NA | 6863.67 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 8/13/2019 | ND | 7.09 | NA | 6871.30 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 6/30/2020 | ND | 7.38 | NA | 6871.01 | 6878.39 | 6880.30 | 1.91 | 135.57 | 112.0 | 122.0 |
| MW-2 | 9/14/2020 | ND | 7.83 | NA | 6870.56 | 6878.39 | 6880.30 | 1.91 | 136.29 | 112.0 | 122.0 |
| MW-2 | 9/16/2021 | ND | 8.31 | NA | 6870.08 | 6878.39 | 6880.30 | 1.91 | 136.29 | 112.0 | 122.0 |
| MW-2 | 9/28/2022 | ND | 11.99 | NA | 6866.40 | 6878.39 | 6880.30 | 1.91 | 141.02 | 112.0 | 122.0 |
| MW-2 | 10/5/2022 | ND | 11.97 | NA | 6866.42 | 6878.39 | 6880.30 | 1.91 | 141.02 | 112.0 | 122.0 |
| MW-4 | 9/17/2014 | ND | 5.94 | NA | 6873.95 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 8/10/2015 | ND | 5.56 | NA | 6874.33 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 9/7/2016 | ND | 5.64 | NA | 6874.25 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 9/21/2017 | ND | 5.82 | NA | 6874.07 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 8/15/2018 | ND | 5.97 | NA | 6873.92 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 12/5/2018 | ND | 6.09 | NA | 6873.80 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 8/13/2019 | ND | 5.26 | NA | 6874.63 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 6/30/2020 | ND | 5.76 | NA | 6874.13 | 6879.89 | 6881.63 | 1.74 | 119.98 | 101.0 | 121.0 |
| MW-4 | 9/14/2020 | ND | 6.26 | NA | 6873.63 | 6879.89 | 6881.63 | 1.74 | 124.16 | 101.0 | 121.0 |
| MW-4 | 9/16/2021 | ND | 3.76 | NA | 6876.13 | 6879.89 | 6881.63 | 1.74 | 125.26 | 101.0 | 121.0 |
| MW-4 | 9/28/2022 | ND | 6.61 | NA | 6873.28 | 6879.89 | 6881.63 | 1.74 | 126.62 | 101.0 | 121.0 |
| MW-4 | 10/5/2022 | ND | 6.63 | NA | 6873.26 | 6879.89 | 6881.63 | 1.74 | 126.62 | 101.0 | 121.0 |
| MW-5 | 9/17/2014 | ND | 8.75 | NA | 6871.45 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 8/10/2015 | ND | 8.57 | NA | 6871.63 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 9/7/2016 | ND | 10.87 | NA | 6869.33 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 9/11/2017 | ND | 8.59 | NA | 6871.61 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| MW-5 | 8/15/2018 | ND | 8.88 | NA | 6871.32 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 12/6/2018 | ND | 14.17 | NA | 6866.03 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 8/14/2019 | ND | 8.42 | NA | 6871.78 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 6/30/2020 | ND | 8.83 | NA | 6871.37 | 6880.20 | 6882.83 | 2.63 | 128.20 | 115.0 | 125.0 |
| MW-5 | 9/14/2020 | ND | 9.36 | NA | 6870.84 | 6880.20 | 6882.83 | 2.63 | 130.37 | 115.0 | 125.0 |
| MW-5 | 9/28/2021 | ND | 9.90 | NA | 6870.30 | 6880.20 | 6882.83 | 2.63 | 130.37 | 115.0 | 125.0 |
| MW-5 | 9/28/2022 | ND | 9.72 | NA | 6870.48 | 6880.20 | 6882.83 | 2.63 | 134.11 | 115.0 | 125.0 |
| MW-5 | 10/5/2022 | ND | 9.67 | NA | 6870.53 | 6880.20 | 6882.83 | 2.63 | 134.11 | 115.0 | 125.0 |
| OW-01 | 3/7/2014 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 6/3/2014 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 9/11/2014 | ND | -0.29 | NA | 6866.61 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 11/10/2014 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 3/9/2015 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 6/3/2015 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 8/12/2015 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 10/28/2015 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 3/3/2016 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 6/6/2016 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 9/6/2016 | ND | -0.30 | NA | 6866.62 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 11/15/2016 | ND | 1.42 | NA | 6864.90 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 2/27/2017 | ND | 1.41 | NA | 6864.91 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 5/31/2017 | ND | 1.47 | NA | 6864.85 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 9/6/2017 | ND | 1.40 | NA | 6864.92 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 12/8/2017 | ND | 1.41 | NA | 6864.91 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 2/27/2018 | ND | 1.15 | NA | 6865.17 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 4/25/2018 | ND | 1.50 | NA | 6864.82 | 6866.32 | 6866.62 | 0.30 | 94.24 | 89.3 | 99.3 |
| OW-01 | 8/14/2018 | ND | 1.50 | NA | 6864.82 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 11/7/2018 | ND | 1.03 | NA | 6865.29 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 3/27/2019 | ND | 1.39 | NA | 6864.93 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 5/21/2019 | ND | 1.43 | NA | 6864.89 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 8/15/2019 | ND | 1.07 | NA | 6865.25 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 10/16/2019 | ND | 1.15 | NA | 6865.17 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 3/9/2020 | ND | 1.40 | NA | 6864.92 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 6/30/2020 | ND | 1.30 | NA | 6865.02 | 6866.32 | 6866.62 | 0.30 | 94.25 | 89.3 | 99.3 |
| OW-01 | 9/15/2020 | ND | 1.15 | NA | 6865.17 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 12/7/2020 | ND | 1.45 | NA | 6864.87 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 2/27/2021 | ND | 1.46 | NA | 6864.86 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 6/1/2021 | ND | 1.10 | NA | 6865.22 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 9/9/2021 | ND | 1.48 | NA | 6864.84 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 12/3/2021 | ND | 1.50 | NA | 6864.82 | 6866.32 | 6866.62 | 0.30 | 99.09 | 89.3 | 99.3 |
| OW-01 | 3/1/2022 | ND | 1.46 | NA | 6864.86 | 6866.32 | 6866.62 | 0.30 | 91.61 | 89.3 | 99.3 |
| OW-01 | 6/1/2022 | ND | 1.10 | NA | 6865.22 | 6866.32 | 6866.62 | 0.30 | 91.61 | 89.3 | 99.3 |
| OW-01 | 9/7/2022 | ND | 1.11 | NA | 6865.21 | 6866.32 | 6866.62 | 0.30 | 91.61 | 89.3 | 99.3 |
| OW-01 | 10/4/2022 | ND | 1.15 | NA | 6865.17 | 6866.32 | 6866.62 | 0.30 | 91.61 | 89.3 | 99.3 |
| OW-01 | 11/3/2022 | ND | 1.12 | NA | 6865.20 | 6866.32 | 6866.62 | 0.30 | 91.61 | 89.3 | 99.3 |
| OW-01 | 12/12/2022 | ND | 1.20 | NA | 6865.12 | 6866.32 | 6866.62 | 0.30 | 90.20 | 89.3 | 99.3 |
| OW-10 | 3/7/2014 | ND | -1.24 | NA | 6874.91 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 6/3/2014 | ND | 0.21 | NA | 6873.46 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-10 | 9/12/2014 | ND | 1.09 | NA | 6872.58 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 11/10/2014 | ND | 1.56 | NA | 6872.11 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 3/9/2015 | ND | -0.28 | NA | 6873.95 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 6/3/2015 | ND | -0.24 | NA | 6873.91 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 8/12/2015 | ND | -0.86 | NA | 6874.53 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 10/28/2015 | ND | 0.23 | NA | 6873.44 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 3/3/2016 | ND | 0.18 | NA | 6873.49 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 6/6/2016 | ND | -0.02 | NA | 6873.69 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 9/6/2016 | ND | 0.46 | NA | 6873.21 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 11/15/2016 | ND | -0.70 | NA | 6874.37 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 2/27/2017 | ND | -0.68 | NA | 6874.35 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 5/31/2017 | ND | -0.17 | NA | 6873.84 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 9/7/2017 | ND | 0.64 | NA | 6873.03 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 12/7/2017 | ND | 1.01 | NA | 6872.66 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 2/27/2018 | ND | 0.74 | NA | 6872.93 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 4/25/2018 | ND | 0.62 | NA | 6873.05 | 6873.67 | 6874.91 | 1.24 | 58.89 | 40.0 | 60.0 |
| OW-10 | 8/15/2018 | ND | 1.17 | NA | 6872.50 | 6873.67 | 6874.91 | 1.24 | 58.89 | 40.0 | 60.0 |
| OW-10 | 11/8/2018 | ND | 1.26 | NA | 6872.41 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 3/27/2019 | ND | -1.24 | NA | 6874.91 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 5/22/2019 | ND | -1.24 | NA | 6874.91 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 8/15/2019 | ND | -0.22 | NA | 6873.89 | 6873.67 | 6874.91 | 1.24 | 58.89 | 40.0 | 60.0 |
| OW-10 | 10/17/2019 | ND | 1.09 | NA | 6872.58 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 3/4/2020 | ND | 4.19 | NA | 6869.48 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 6/30/2020 | ND | 5.51 | NA | 6868.16 | 6873.67 | 6874.91 | 1.24 | 59.09 | 40.0 | 60.0 |
| OW-10 | 9/20/2020 | ND | 6.46 | NA | 6867.21 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 10/9/2020 | ND | 6.46 | NA | 6867.21 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 12/7/2020 | ND | 6.37 | NA | 6867.30 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 1/28/2021 | ND | 6.60 | NA | 6867.07 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 2/28/2021 | ND | 6.61 | NA | 6867.06 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 3/31/2021 | ND | 6.44 | NA | 6867.23 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 4/26/2021 | ND | 6.43 | NA | 6867.24 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 5/20/2021 | ND | 6.35 | NA | 6867.32 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 6/3/2021 | ND | 6.65 | NA | 6867.02 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 9/9/2021 | ND | 7.41 | NA | 6866.26 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 12/3/2021 | ND | 6.71 | NA | 6866.96 | 6873.67 | 6874.91 | 1.24 | 65.06 | 40.0 | 60.0 |
| OW-10 | 3/1/2022 | ND | 6.17 | NA | 6867.50 | 6873.67 | 6874.91 | 1.24 | 63.61 | 40.0 | 60.0 |
| OW-10 | 6/1/2022 | ND | 6.48 | NA | 6867.19 | 6873.67 | 6874.91 | 1.24 | 65.22 | 40.0 | 60.0 |
| OW-10 | 9/2/2022 | ND | 6.59 | NA | 6867.08 | 6873.67 | 6874.91 | 1.24 | 65.22 | 40.0 | 60.0 |
| OW-10 | 10/4/2022 | ND | 6.61 | NA | 6867.06 | 6873.67 | 6874.91 | 1.24 | 65.22 | 40.0 | 60.0 |
| OW-10 | 11/3/2022 | ND | 6.51 | NA | 6867.16 | 6873.67 | 6874.91 | 1.24 | 65.22 | 40.0 | 60.0 |
| OW-10 | 12/22/2022 | ND | 6.72 | NA | 6866.95 | 6873.67 | 6874.91 | 1.24 | 65.21 | 40.0 | 60.0 |
| OW-11 | 9/12/2014 | ND | 18.65 | NA | 6903.40 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 8/10/2015 | ND | 17.84 | NA | 6904.21 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 9/9/2016 | ND | 17.33 | NA | 6904.72 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 9/18/2017 | ND | 16.62 | NA | 6905.43 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 8/15/2018 | ND | 17.74 | NA | 6904.31 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 8/20/2019 | ND | 16.24 | NA | 6905.81 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 9/15/2020 | ND | 17.05 | NA | 6905.00 | 6922.05 | 6923.51 | 1.46 | 64.37 | 43.0 | 65.0 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product
(ft-bgs) | Depth to Water ¹
(ft-bgs) | Product Thickness
(ft) | Water Elevation
(ft-msl) | Ground Surface Elevation ²
(ft-msl) | Measuring Point Elevation
(ft-msl) | Well Casing Height ³
(ft) | Total Depth
(ft-bgs) | Depth to Top Screen
(ft-bgs) | Depth to Bottom Screen
(ft-bgs) |
|----------|---------------|------------------------------|---|---------------------------|-----------------------------|---|---------------------------------------|---|-------------------------|---------------------------------|------------------------------------|
| OW-11 | 9/9/2021 | ND | 17.44 | NA | 6904.61 | 6922.05 | 6923.51 | 1.46 | 64.33 | 43.0 | 65.0 |
| OW-11 | 9/2/2022 | | 17.42 | 0.02 | 6904.61 | 6922.05 | 6923.51 | 1.46 | 62.54 | 43.0 | 65.0 |
| OW-11 | 10/4/2022 | | 17.50 | 0.03 | 6904.52 | 6922.05 | 6923.51 | 1.46 | 62.54 | 43.0 | 65.0 |
| OW-11 | 11/3/2022 | | 17.47 | 0.04 | 6904.54 | 6922.05 | 6923.51 | 1.46 | 62.54 | 43.0 | 65.0 |
| OW-11 | 12/6/2022 | | 17.37 | 0.07 | 6904.61 | 6922.05 | 6923.51 | 1.46 | 62.54 | 43.0 | 65.0 |
| OW-11 | 12/11/2022 | | 17.41 | 0.11 | 6904.53 | 6922.05 | 6923.51 | 1.46 | 62.54 | 43.0 | 65.0 |
| OW-12 | 9/12/2014 | ND | 46.66 | NA | 6892.91 | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 8/13/2015 | ND | 46.30 | NA | 6893.27 | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 9/8/2016 | ND | 46.11 | NA | 6893.46 | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 9/19/2017 | ND | 45.62 | NA | 6893.95 | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 8/15/2018 | ND | 45.38 | NA | 6894.19 | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 6/30/2020 | ND | Dry | NA | Dry | 6939.57 | 6940.69 | 1.12 | 127.73 | 117.8 | 137.8 |
| OW-12 | 9/14/2020 | ND | 45.33 | NA | 6894.24 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-12 | 11/9/2020 | ND | 45.37 | NA | 6894.20 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-12 | 1/28/2021 | ND | 45.08 | NA | 6894.49 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-12 | 9/28/2021 | ND | 45.78 | NA | 6893.79 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-12 | 12/3/2022 | ND | 45.93 | NA | 6893.64 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-12 | 12/7/2022 | ND | 54.48 | NA | 6885.09 | 6939.57 | 6940.69 | 1.12 | 130.08 | 117.8 | 137.8 |
| OW-13 | 3/7/2014 | ND | 20.65 | NA | 6898.30 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 6/3/2014 | ND | 20.83 | NA | 6898.12 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 9/15/2014 | ND | 21.49 | NA | 6897.46 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 11/10/2014 | ND | 21.33 | NA | 6897.62 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 3/9/2015 | ND | 20.80 | NA | 6898.15 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 6/1/2015 | ND | 20.64 | NA | 6898.31 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 8/10/2015 | ND | 21.02 | NA | 6897.93 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 10/27/2015 | ND | 20.98 | NA | 6897.97 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 3/4/2016 | ND | 20.31 | NA | 6898.64 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 6/6/2016 | ND | 20.33 | NA | 6898.62 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 8/31/2016 | ND | 20.82 | NA | 6898.13 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 11/15/2016 | ND | 20.56 | NA | 6898.39 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 2/27/2017 | ND | 19.99 | NA | 6898.96 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 5/31/2017 | ND | 20.33 | NA | 6898.62 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 9/6/2017 | ND | 20.29 | NA | 6898.66 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 12/11/2017 | ND | 19.88 | NA | 6899.07 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 2/28/2018 | ND | 19.38 | NA | 6899.57 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 4/26/2018 | ND | 19.29 | NA | 6899.66 | 6918.95 | 6920.07 | 1.12 | 97.88 | 78.2 | 98.2 |
| OW-13 | 8/14/2018 | ND | 19.58 | NA | 6899.37 | 6918.95 | 6920.07 | 1.12 | 100.88 | 78.2 | 98.2 |
| OW-13 | 11/6/2018 | ND | 19.58 | NA | 6899.37 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 2/5/2019 | ND | 19.26 | NA | 6899.69 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 5/1/2019 | ND | 18.88 | NA | 6900.07 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 8/12/2019 | ND | 19.38 | NA | 6899.57 | 6918.95 | 6920.07 | 1.12 | 100.88 | 78.2 | 98.2 |
| OW-13 | 10/14/2019 | ND | 19.62 | NA | 6899.33 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 3/2/2020 | ND | 18.79 | NA | 6900.16 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 6/30/2020 | ND | 21.04 | NA | 6897.91 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 9/14/2020 | ND | 19.87 | NA | 6899.08 | 6918.95 | 6920.07 | 1.12 | 90.53 | 78.2 | 98.2 |
| OW-13 | 11/9/2020 | ND | 19.26 | NA | 6899.69 | 6918.95 | 6920.07 | 1.12 | 90.53 | 78.2 | 98.2 |
| OW-13 | 12/7/2020 | ND | 19.12 | NA | 6899.83 | 6918.95 | 6920.07 | 1.12 | 90.53 | 78.2 | 98.2 |
| OW-13 | 2/27/2021 | ND | 19.26 | NA | 6899.69 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |

APPENDIX B-1. FLUID LEVEL MONITORING (2014 - 2022)
WESTERN REFINING SOUTHWEST LLC, D/B/A MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO

| Location | Date Measured | Depth to Product (ft-bgs) | Depth to Water ¹ (ft-bgs) | Product Thickness (ft) | Water Elevation (ft-msl) | Ground Surface Elevation ² (ft-msl) | Measuring Point Elevation (ft-msl) | Well Casing Height ³ (ft) | Total Depth (ft-bgs) | Depth to Top Screen (ft-bgs) | Depth to Bottom Screen (ft-bgs) |
|----------|---------------|---------------------------|--------------------------------------|------------------------|--------------------------|--|------------------------------------|--------------------------------------|----------------------|------------------------------|---------------------------------|
| OW-13 | 6/2/2021 | ND | 19.08 | NA | 6899.87 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 9/23/2021 | ND | 20.26 | NA | 6898.69 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 12/1/2021 | ND | 19.78 | NA | 6899.17 | 6918.95 | 6920.07 | 1.12 | 98.03 | 78.2 | 98.2 |
| OW-13 | 3/2/2022 | ND | 19.73 | NA | 6899.22 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |
| OW-13 | 6/1/2022 | ND | 20.05 | NA | 6898.90 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |
| OW-13 | 9/2/2022 | ND | 20.68 | NA | 6898.27 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |
| OW-13 | 10/4/2022 | ND | 20.64 | NA | 6898.31 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |
| OW-13 | 11/3/2022 | ND | 20.73 | NA | 6898.22 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |
| OW-13 | 12/6/2022 | ND | 20.76 | NA | 6898.19 | 6918.95 | 6920.07 | 1.12 | 100.58 | 78.2 | 98.2 |

-- - Data not available
ft - Foot or feet
ft-bgs - Feet below ground surface
ft-msl - Feet mean sea level
ND - Not detected
NA - Not applicable

Notes:
* The depth-to-product and depth-to-water numbers were reversed as they were written in the incorrect locations on the field form. The resulting product thickness is consistent with previous events.
¹ A negative depth-to-water measurement denotes an artesian well where the water surface comes into the casing above the ground surface - the negative value represents the distance above ground surface.
² Around the first quarter of 2019, some well casing heights were remeasured, but the ground surface elevations were not adjusted to reflect the change.
³ A negative well casing height denotes a flush-mount well where the measuring point is below the ground surface.



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Appendix B-2. Hydrographs

Appendix B-2A. Historical Groundwater Elevations and SPH Thicknesses – Alluvial/Fluvial Upper Sand Aquifer

Appendix B-2B. Historical Groundwater Elevations and SPH Thicknesses – Chinle/Alluvium Aquifer

Appendix B-2C. Historical Groundwater Elevations and SPH Thicknesses – Sonsela Aquifer



Western Refining Southwest LLC
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Appendix B-2A. Historical Groundwater Elevations and SPH Thicknesses – Alluvial/Fluvial Upper Sand Aquifer

**APPENDIX B-2A. BW-1A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
ALLUVIAL/FLUVIAL UPPER SAND AQUIFER**

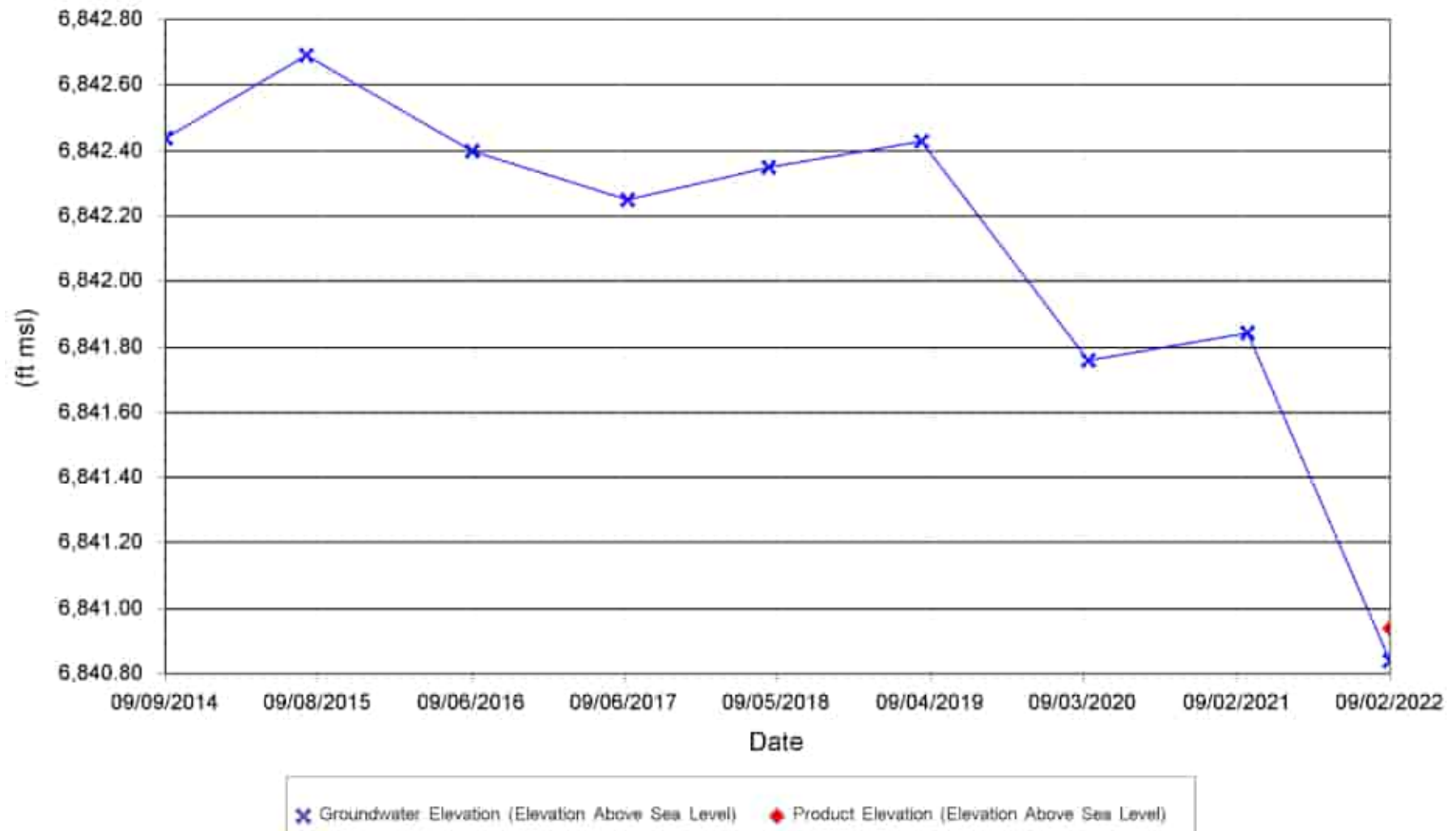


Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2A. BW-2A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
ALLUVIAL/FLUVIAL UPPER SAND AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2A. BW-3A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
ALLUVIAL/FLUVIAL UPPER SAND AQUIFER**



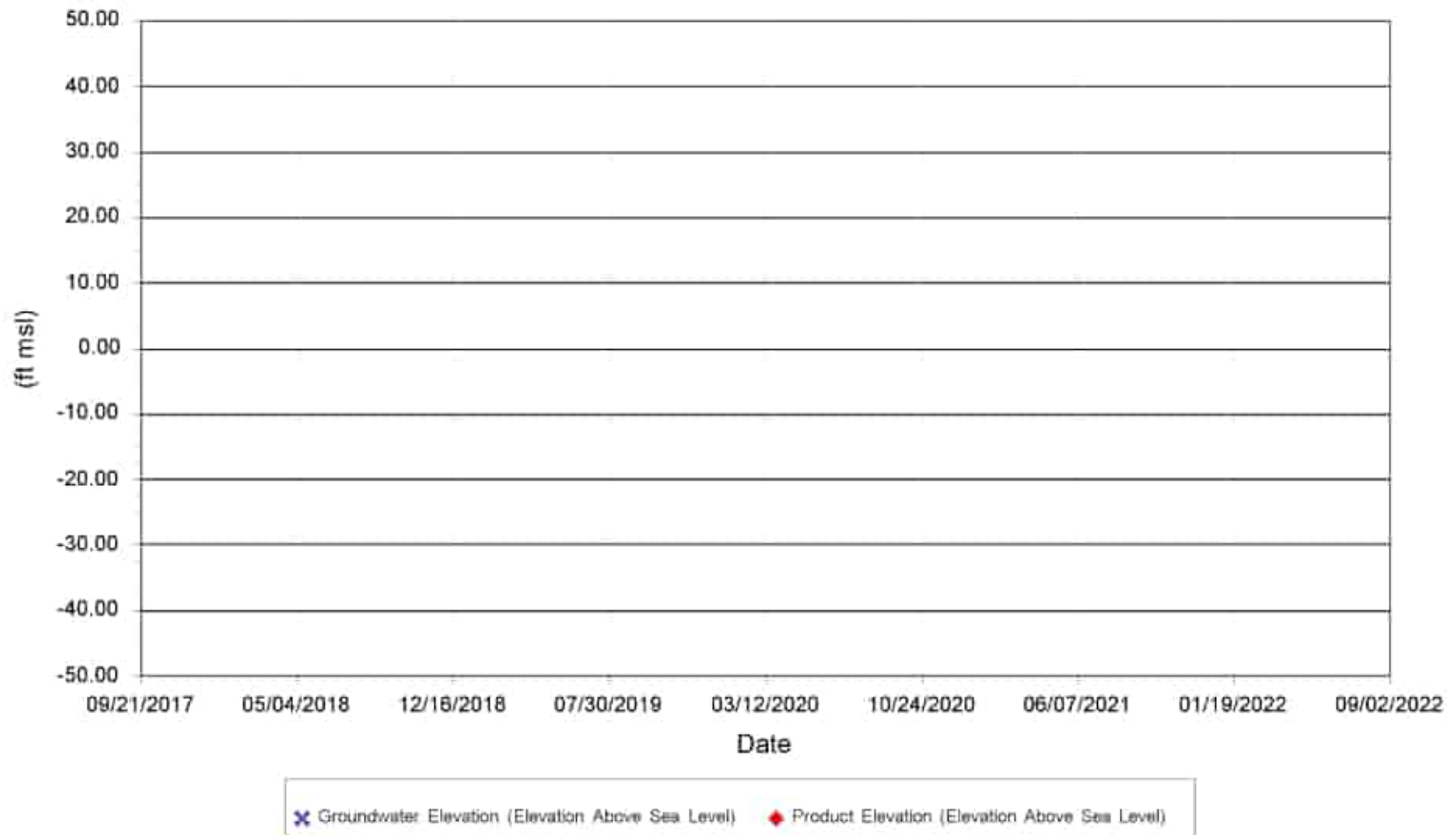
Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2A. BW-4A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
ALLUVIAL/FLUVIAL UPPER SAND AQUIFER**



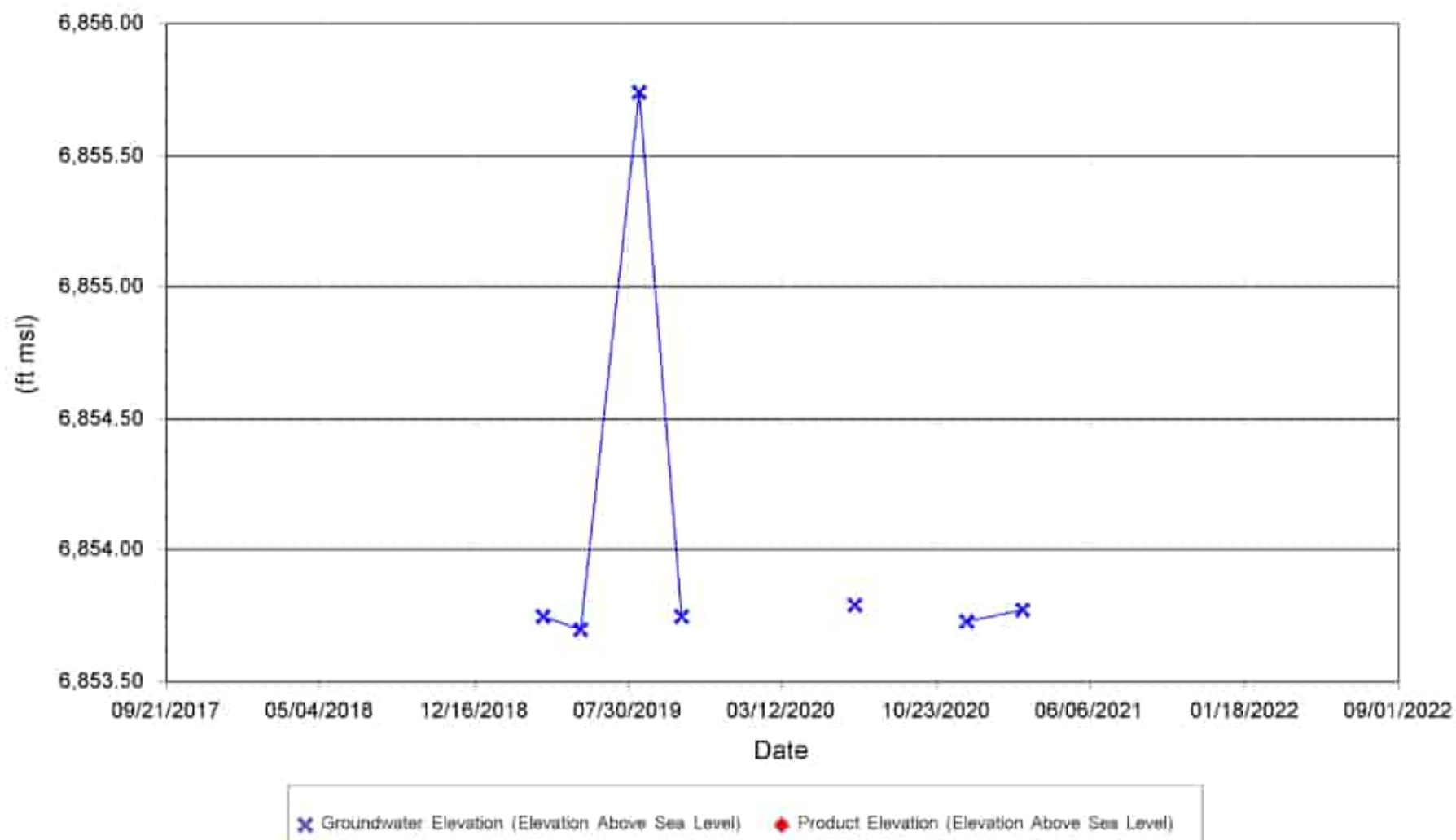
Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2A. BW-5A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
ALLUVIAL/FLUVIAL UPPER SAND AQUIFER**

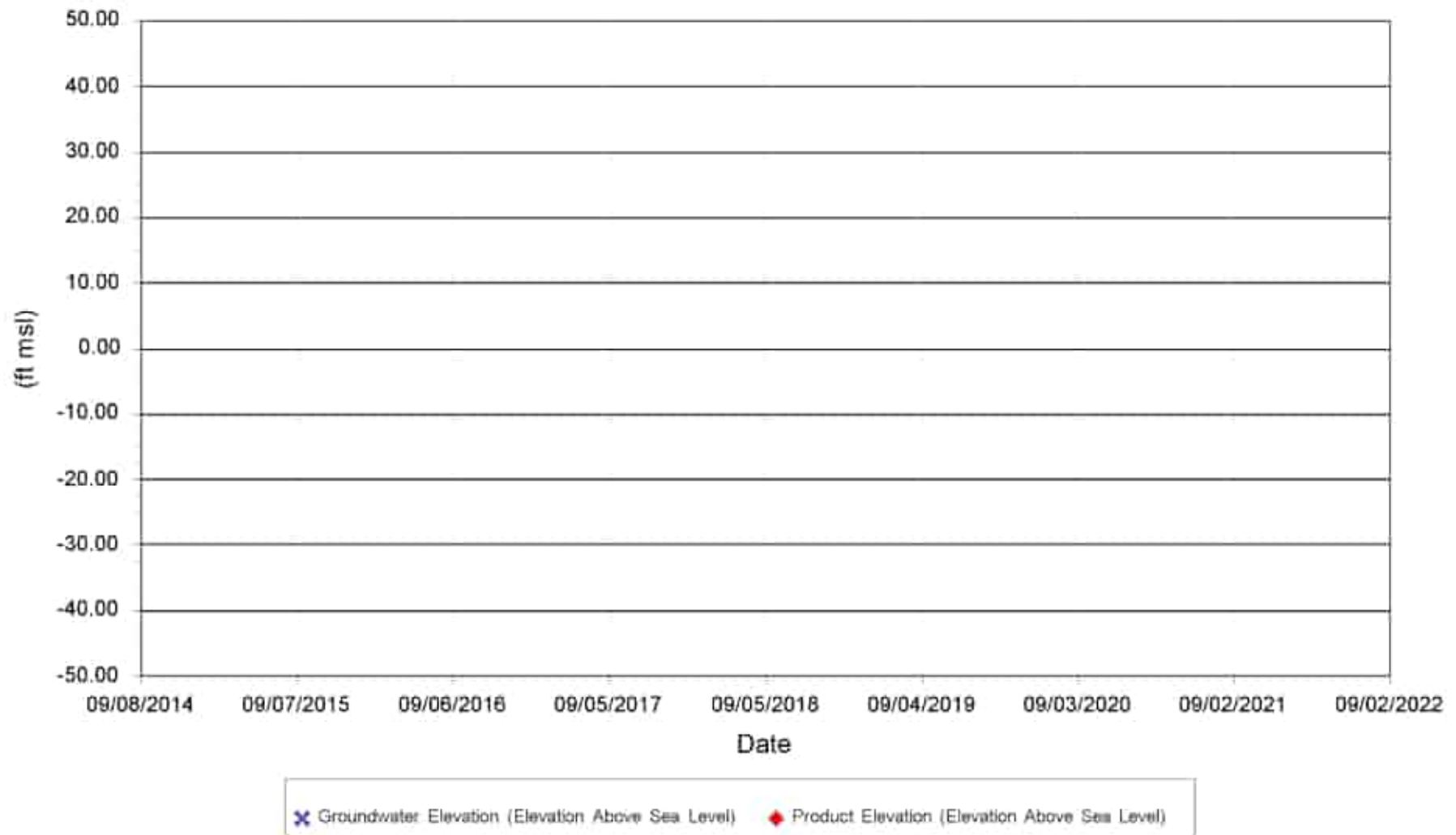


Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)



Western Refining Southwest LLC
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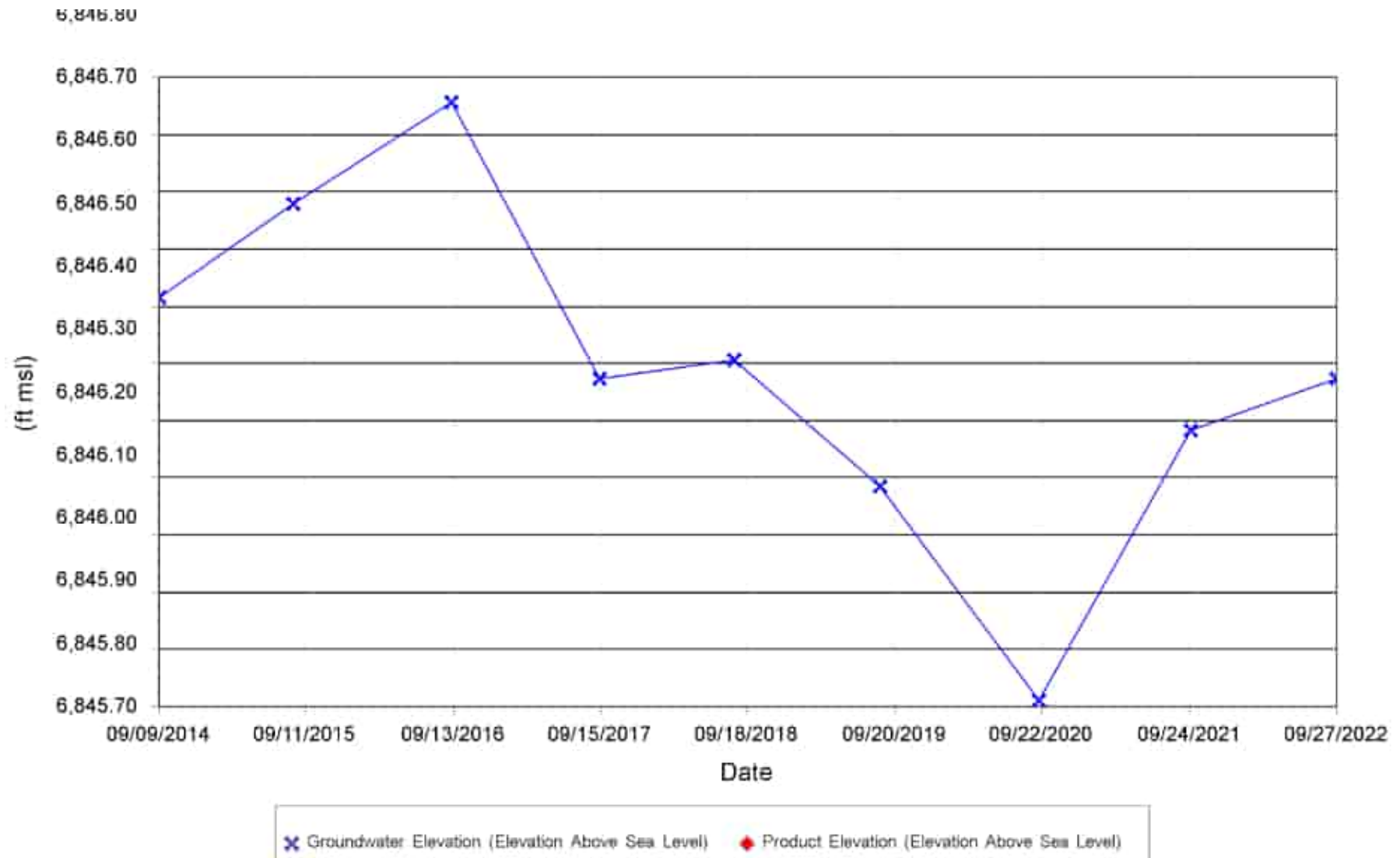
Appendix B-2B. Historical Groundwater Elevations and SPH Thicknesses – Chinle/Alluvium Aquifer

**APPENDIX B-2B. BW-1B HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

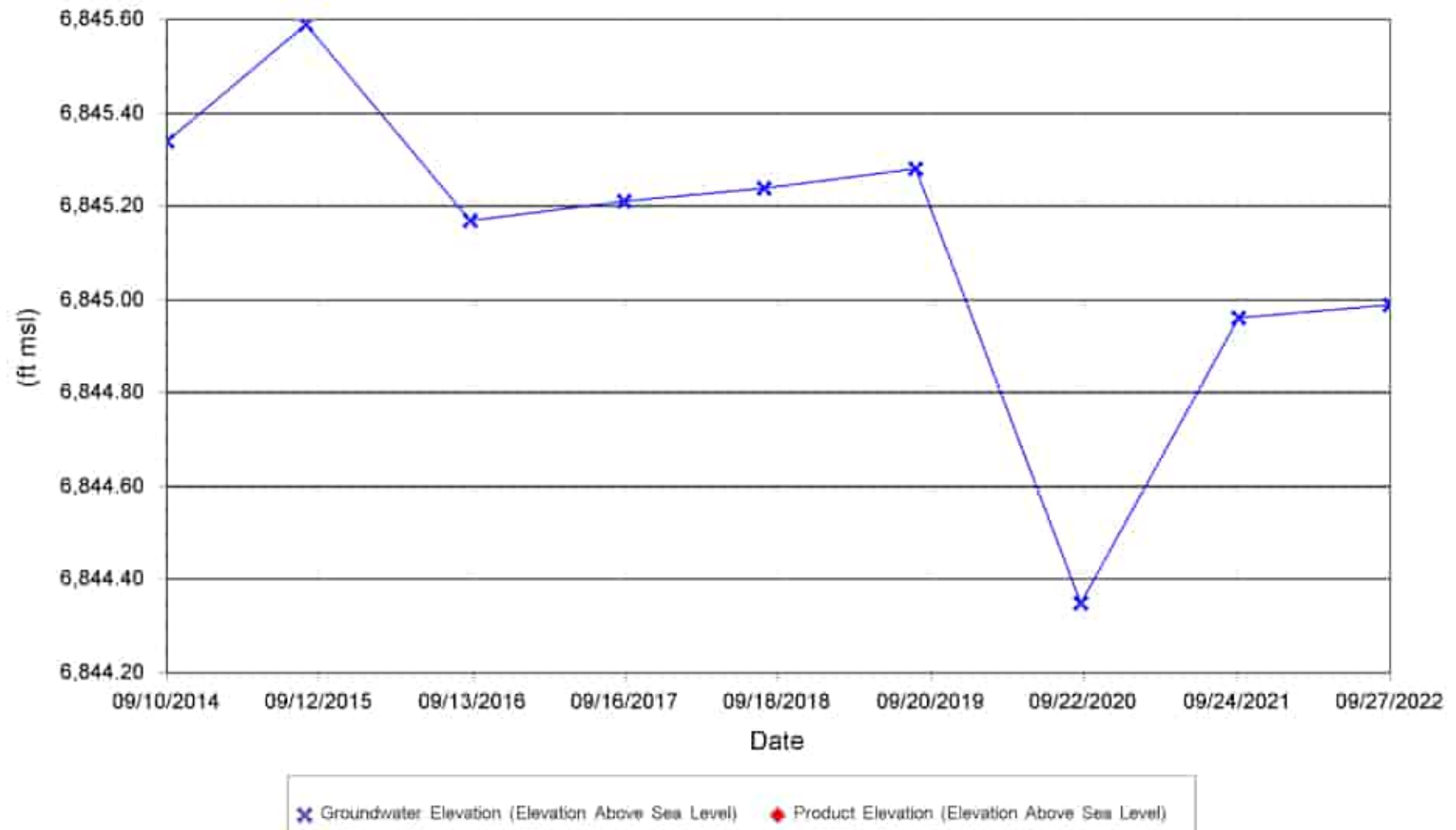
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. BW-2B HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

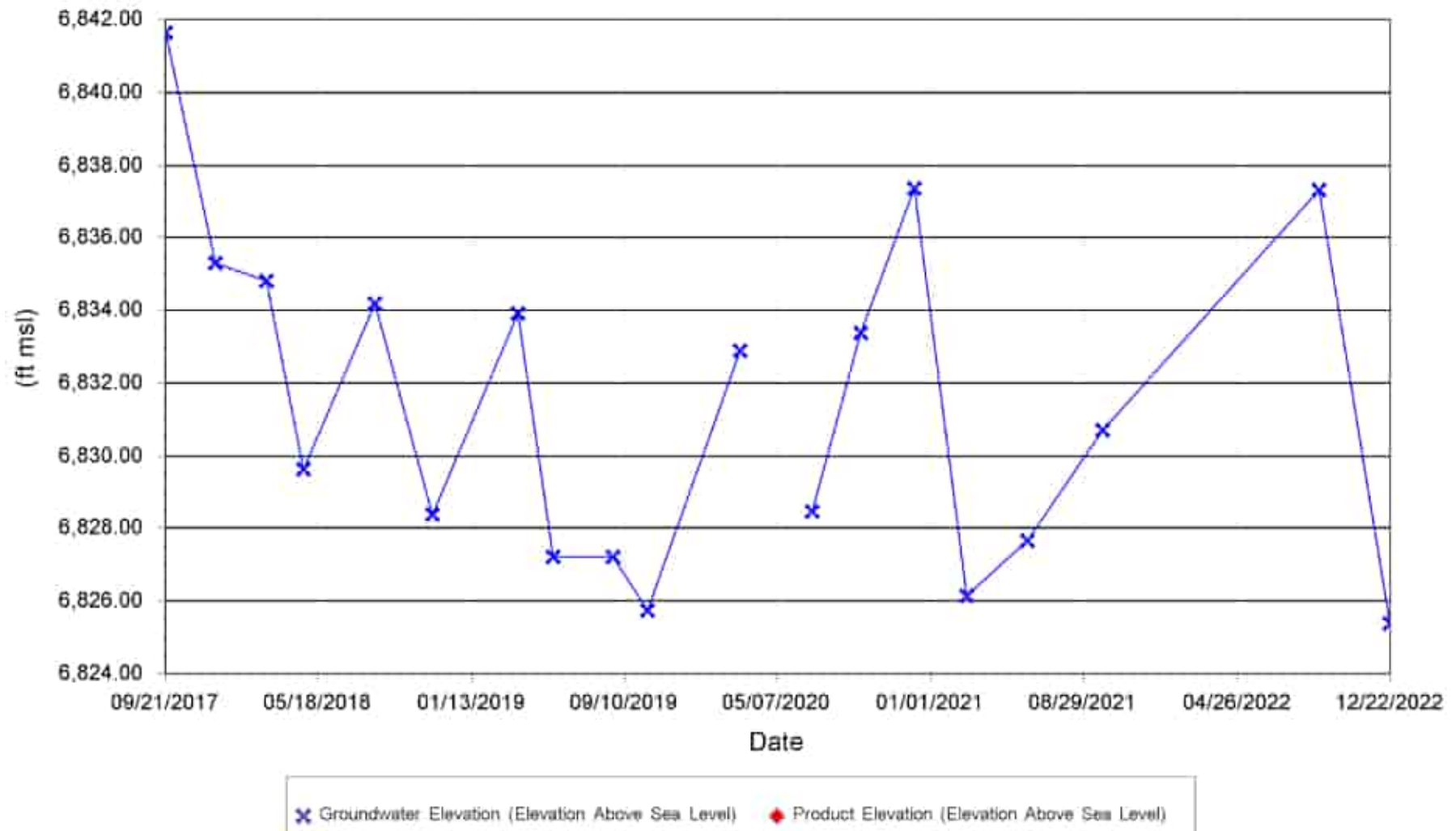
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. BW-3B HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

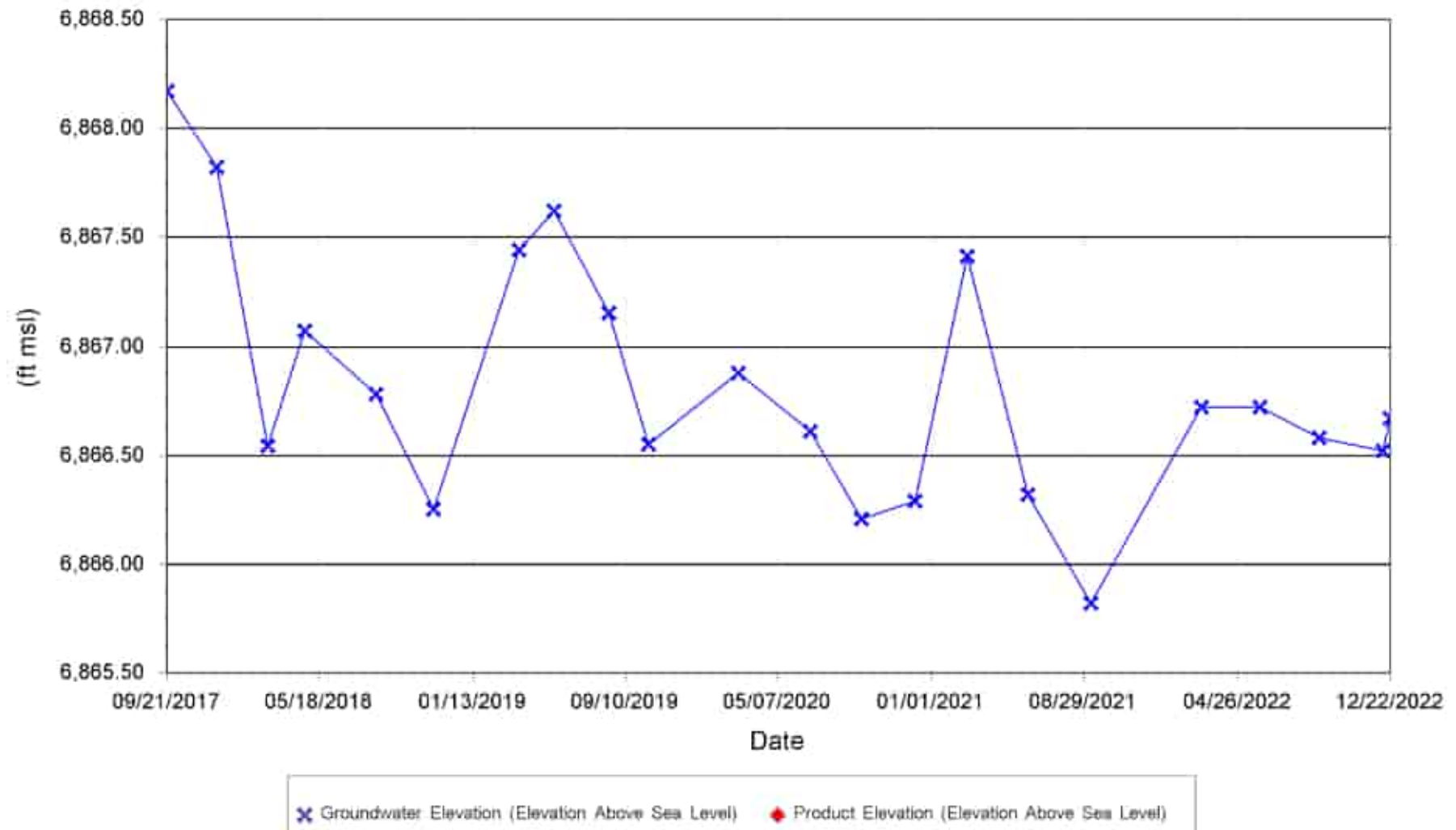
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. BW-4B HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

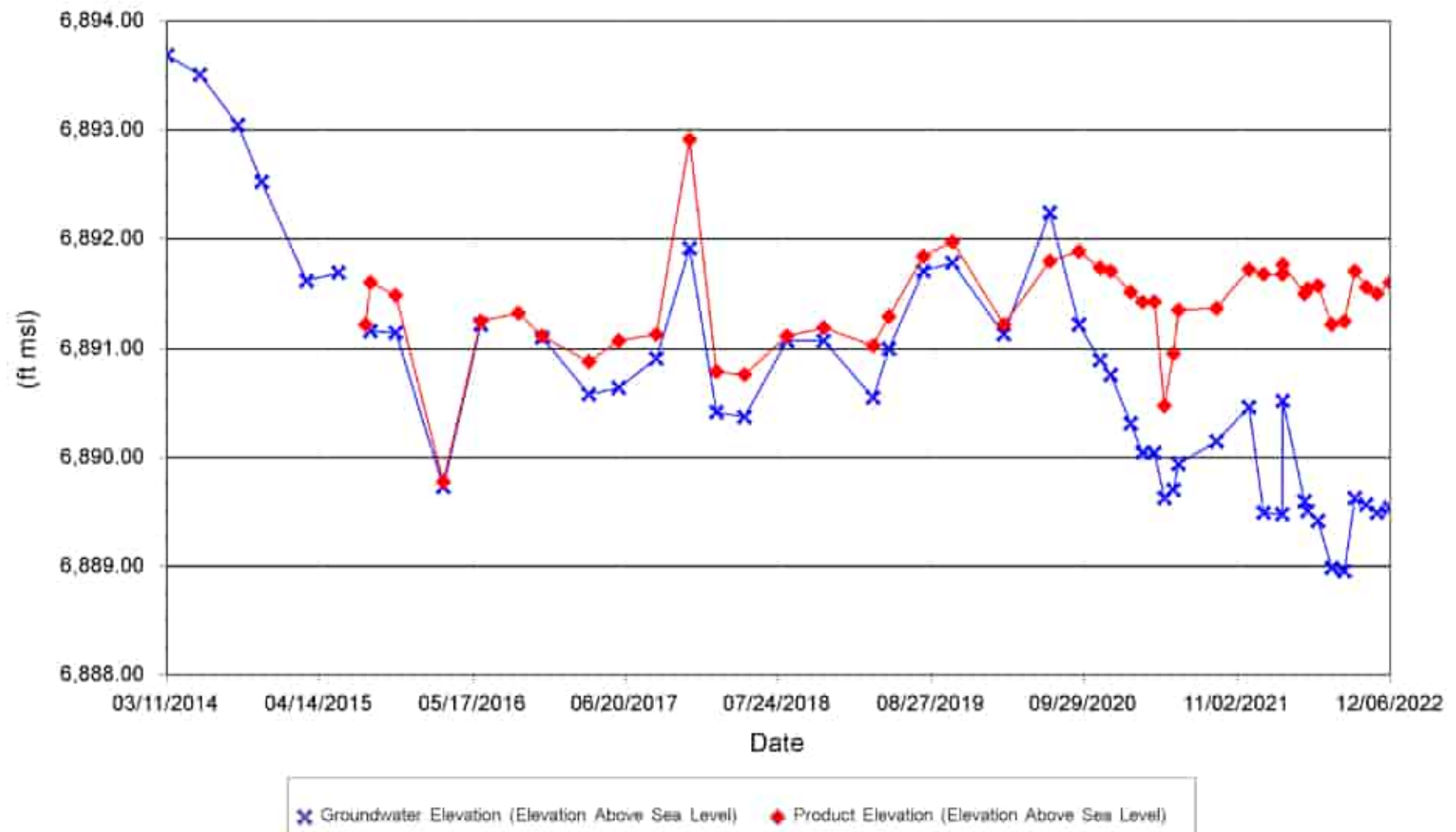
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. BW-5B HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

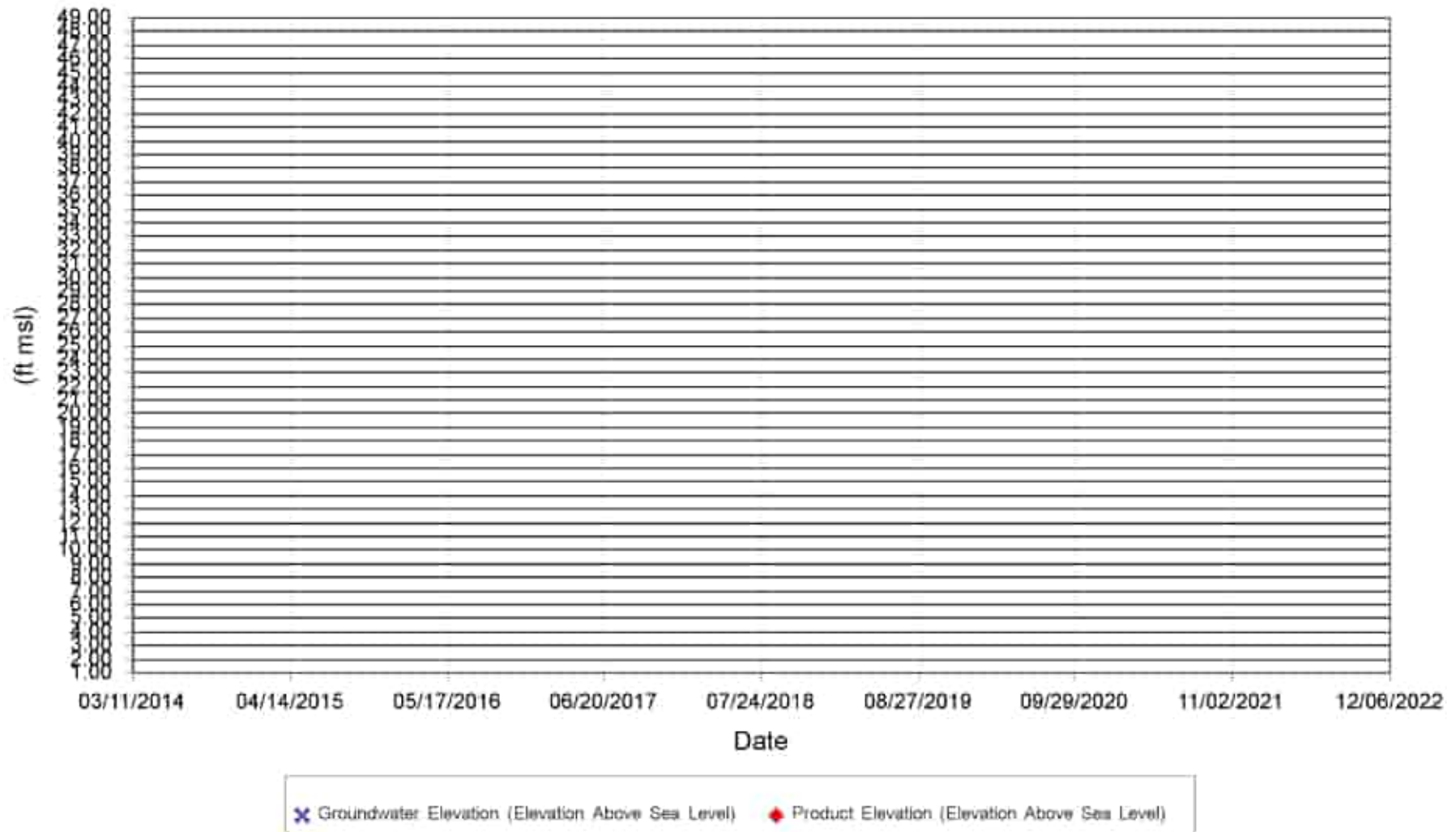
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. GWM-1 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

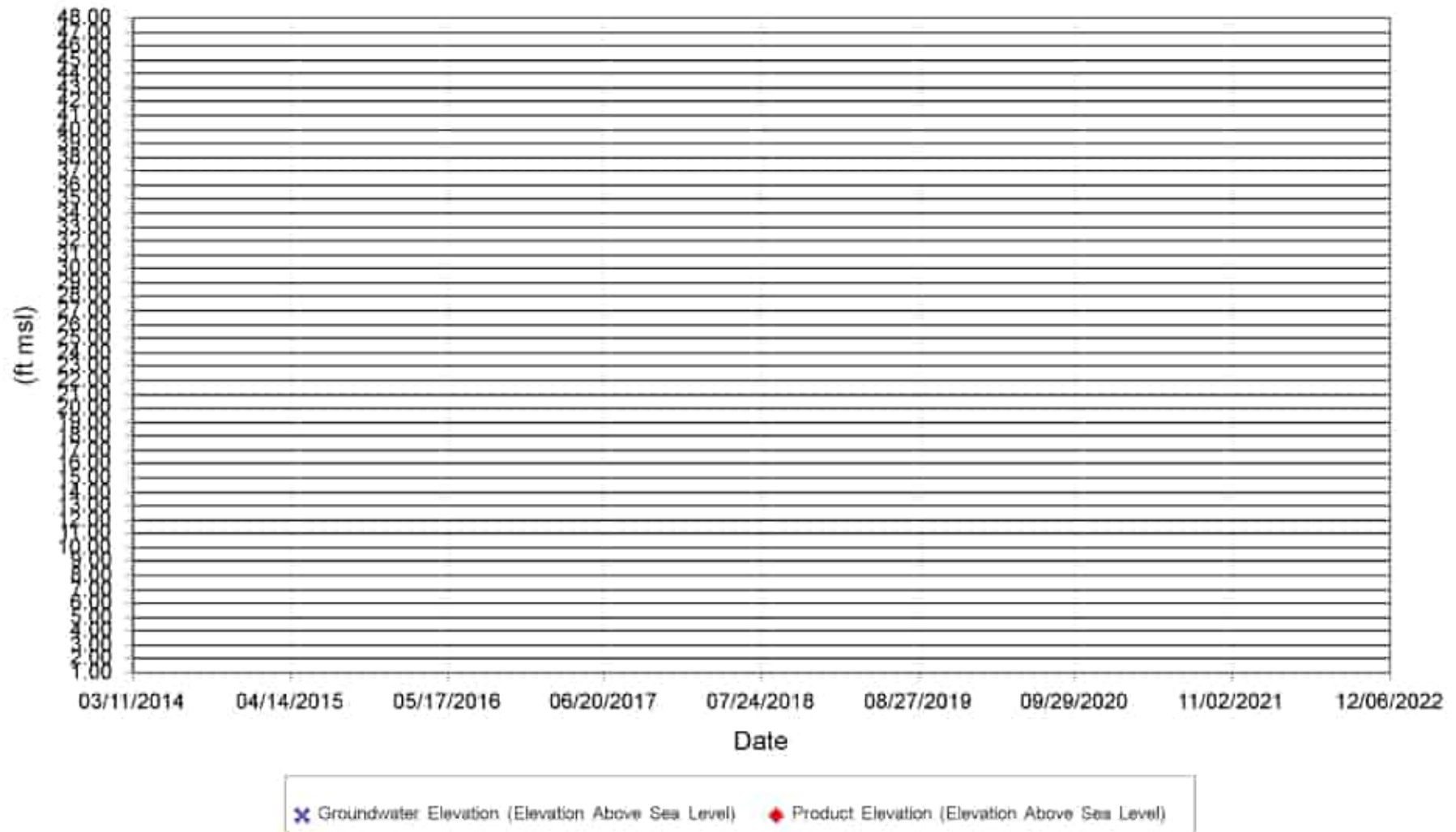
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. GWM-2 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

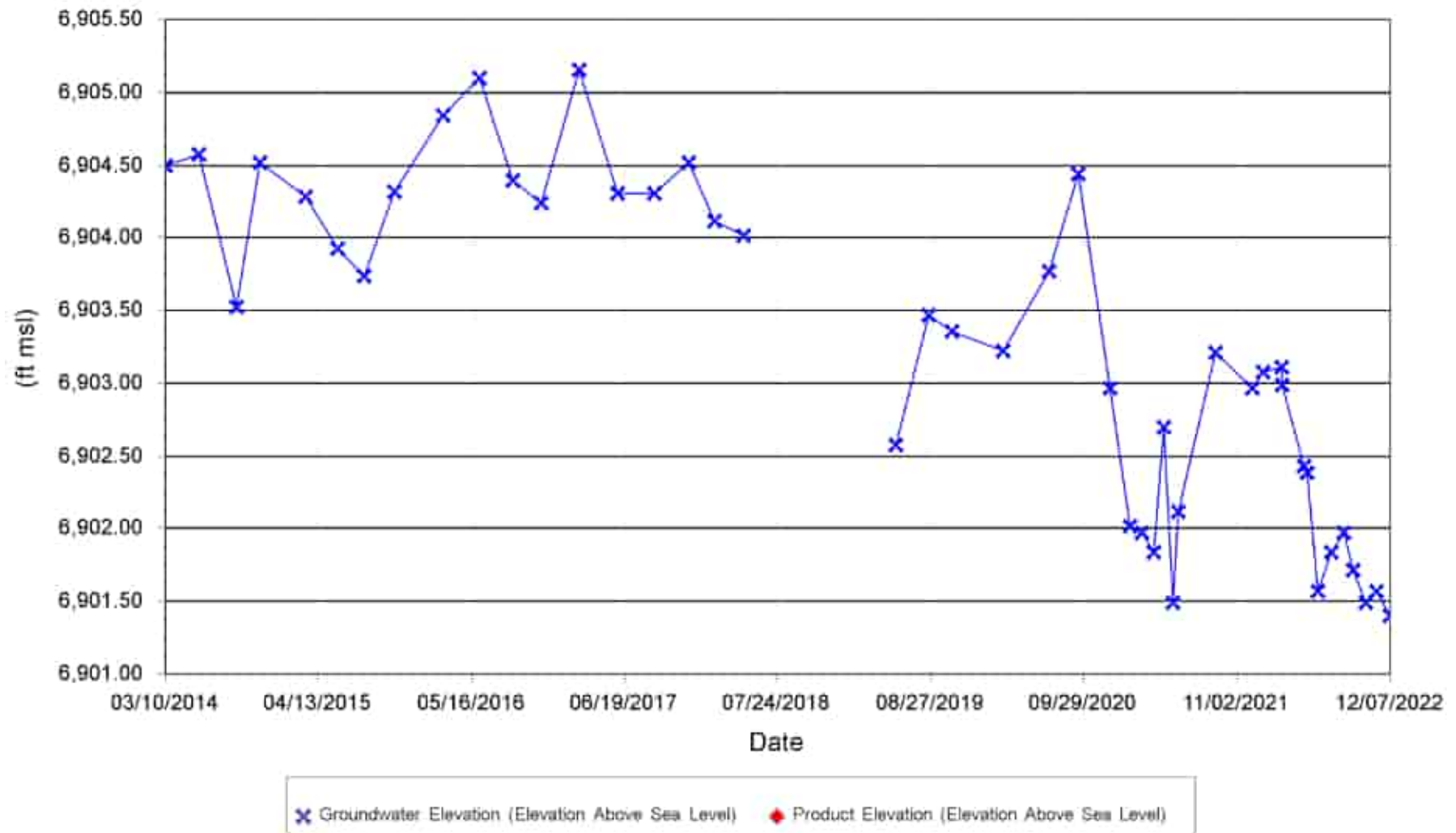
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. GWM-3 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

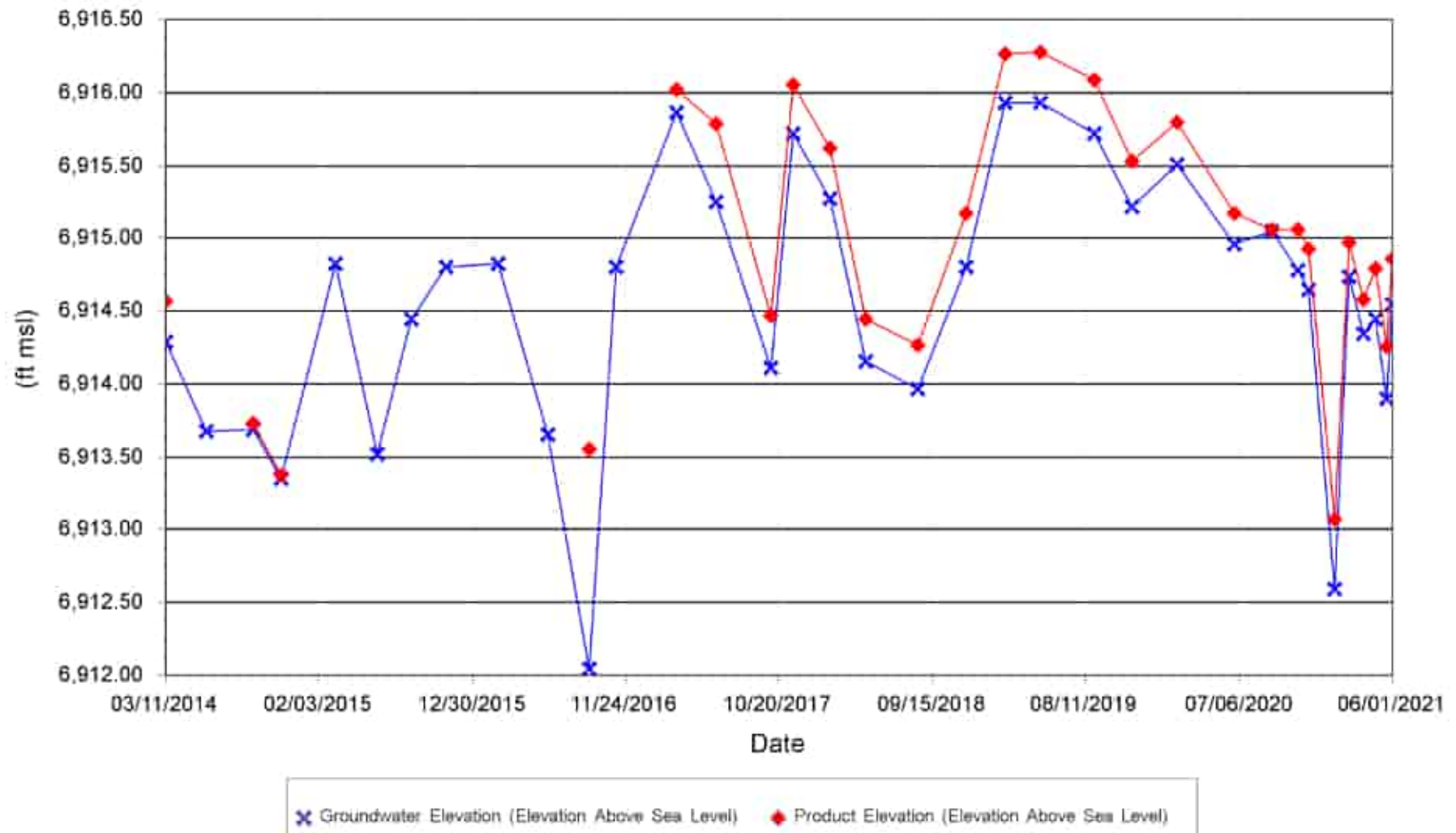
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

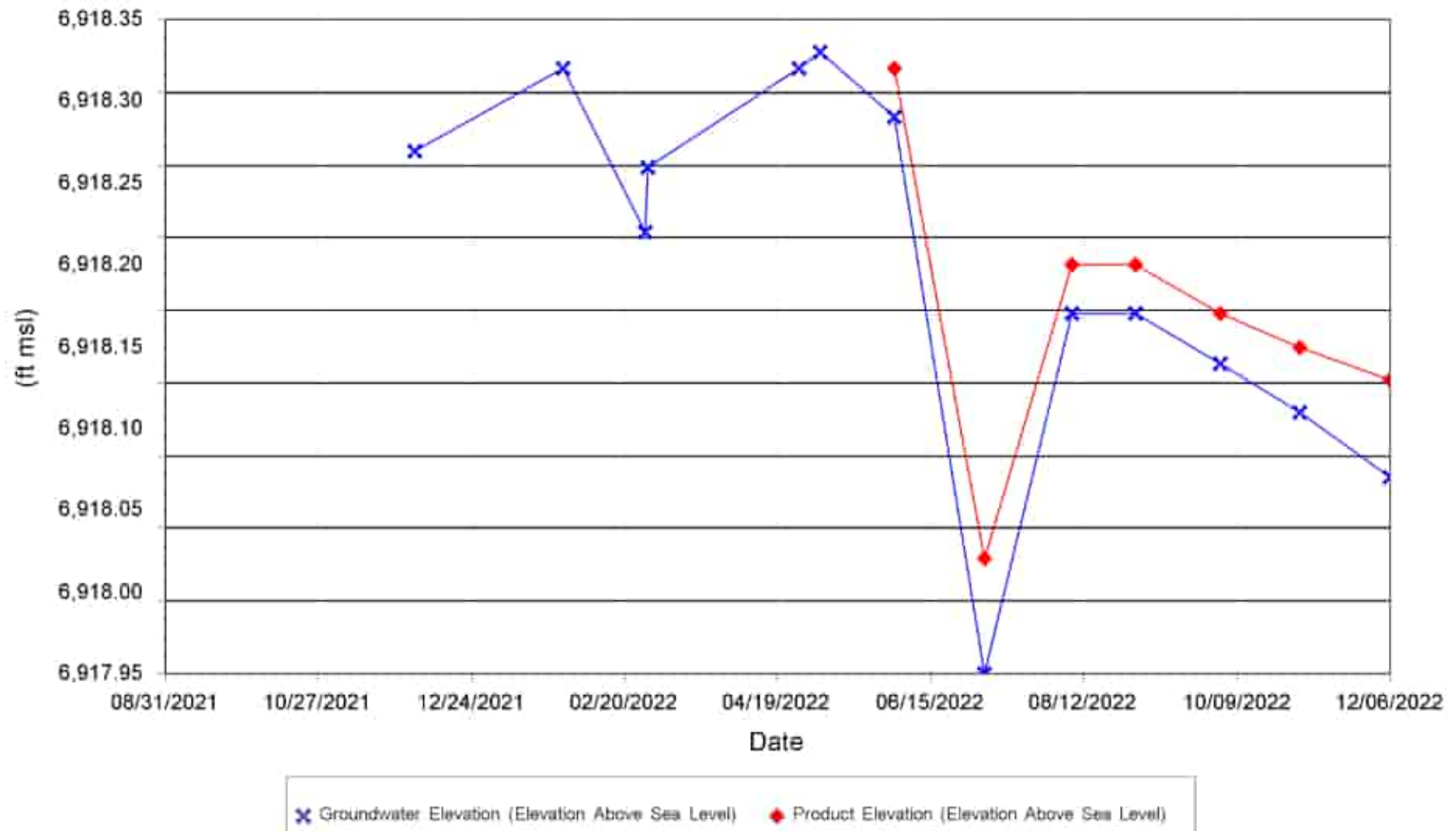
**APPENDIX B-2B. KA-3 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

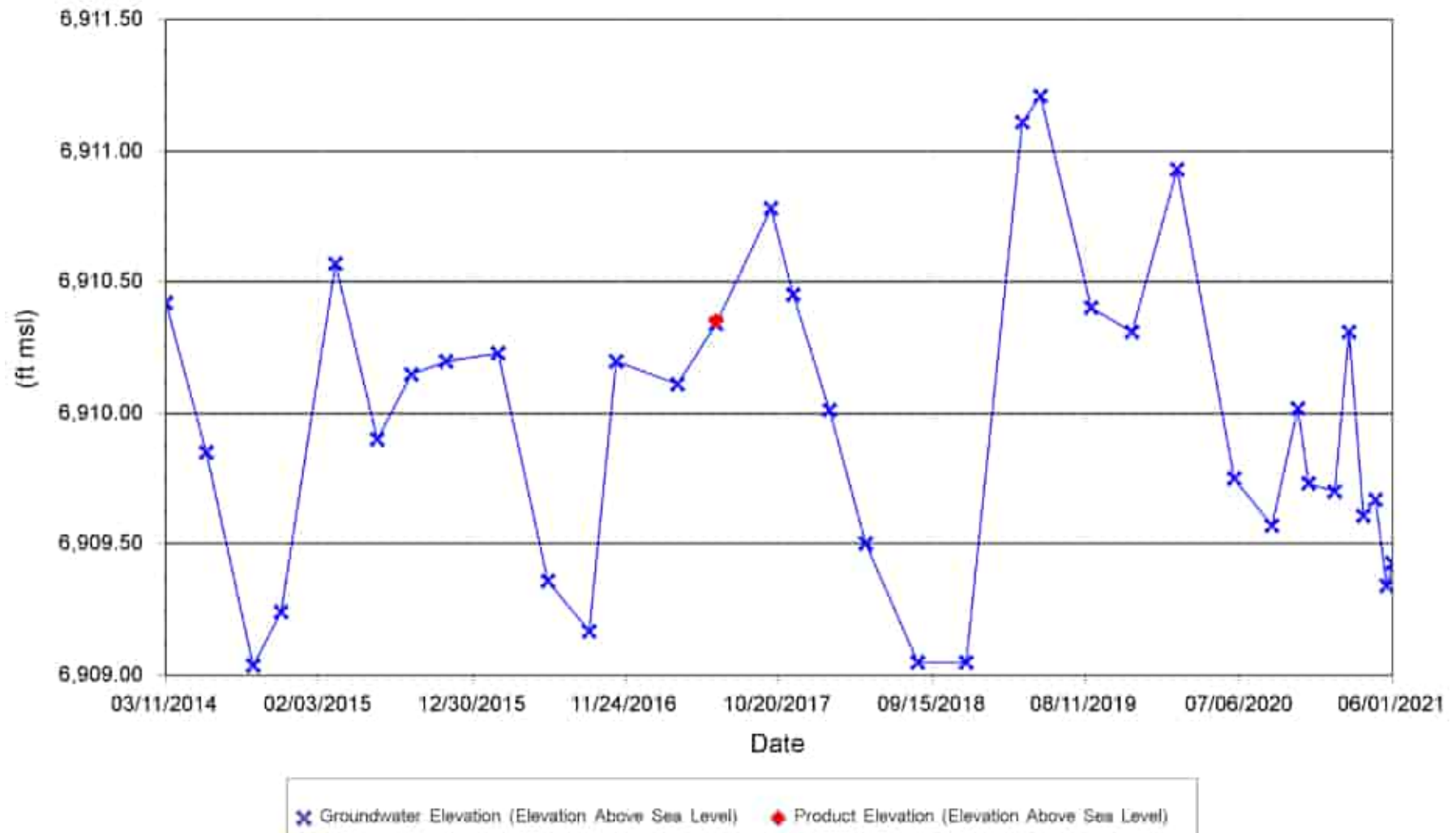
APPENDIX B-2B. MKTF-01 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-01R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

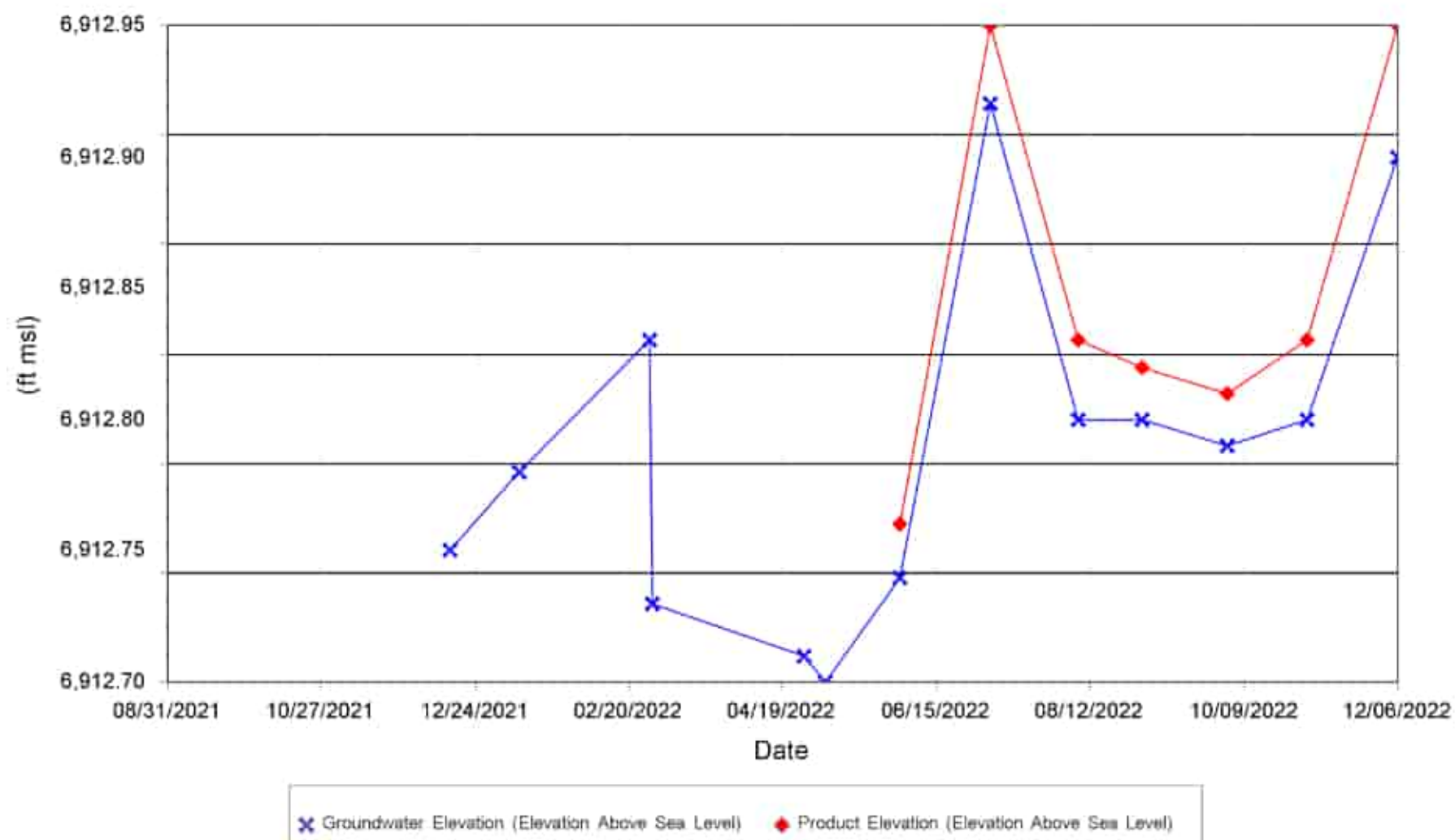
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-02 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

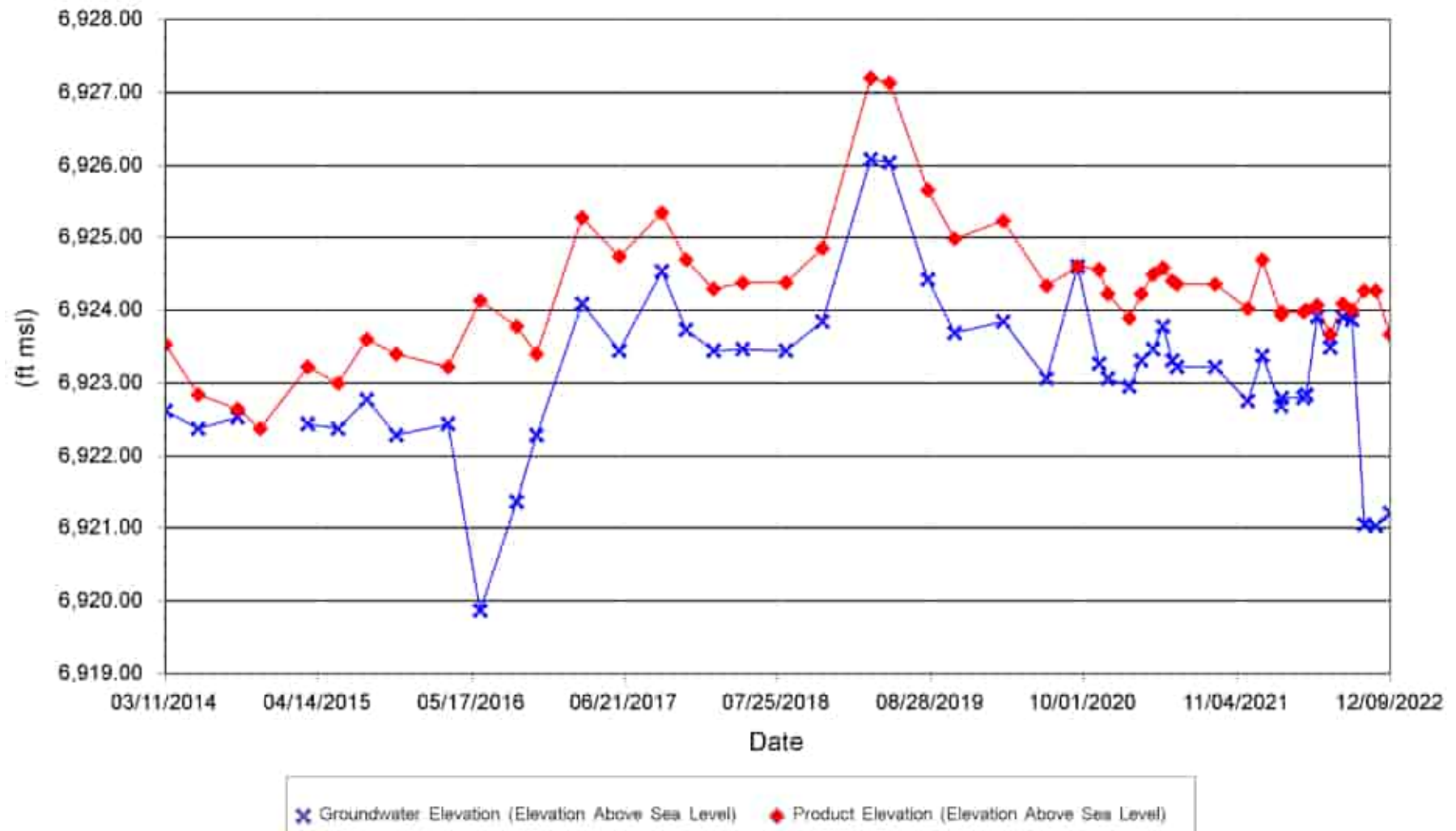
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-02R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

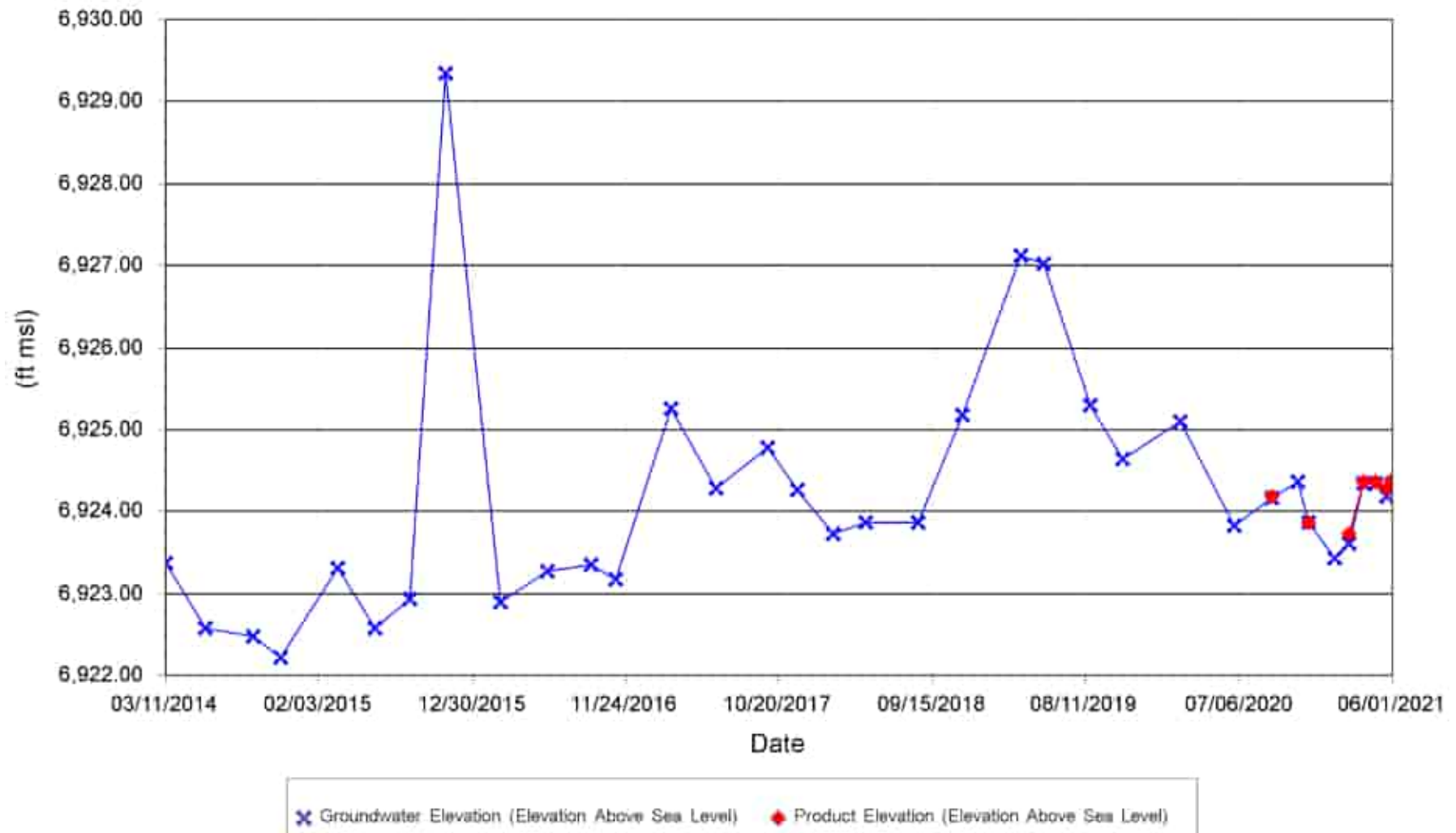
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-03 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

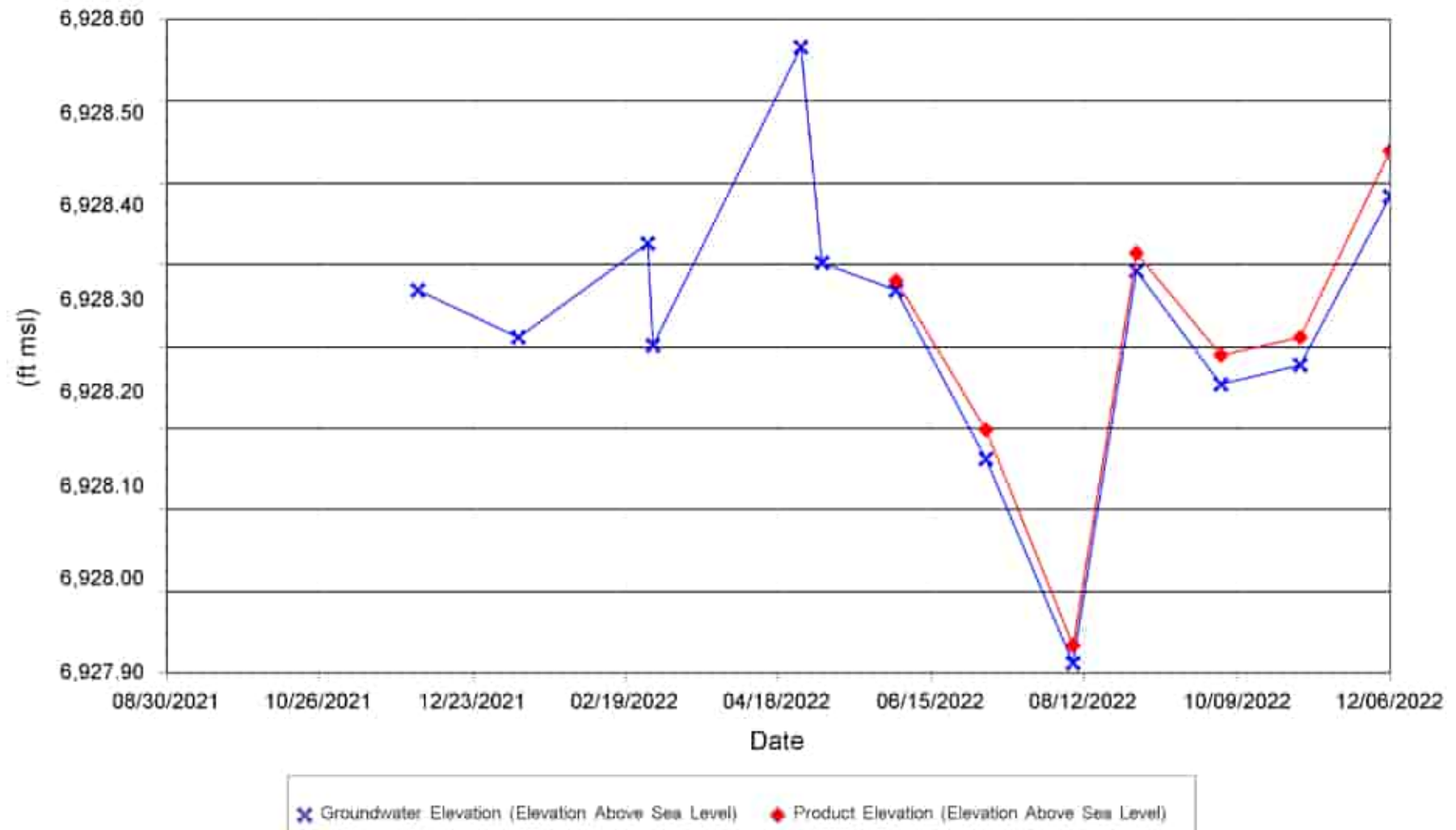
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-04 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

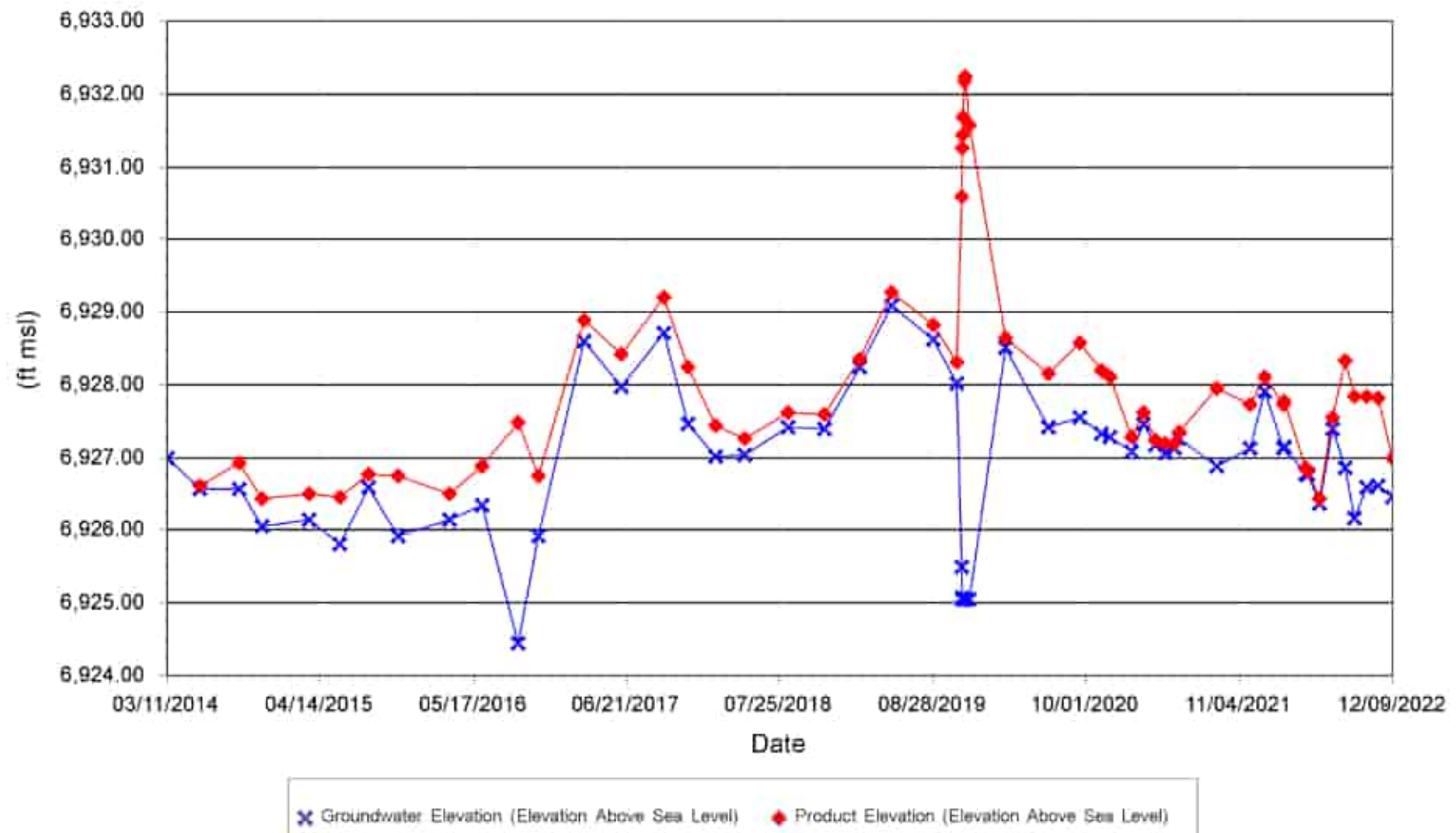
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-04R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

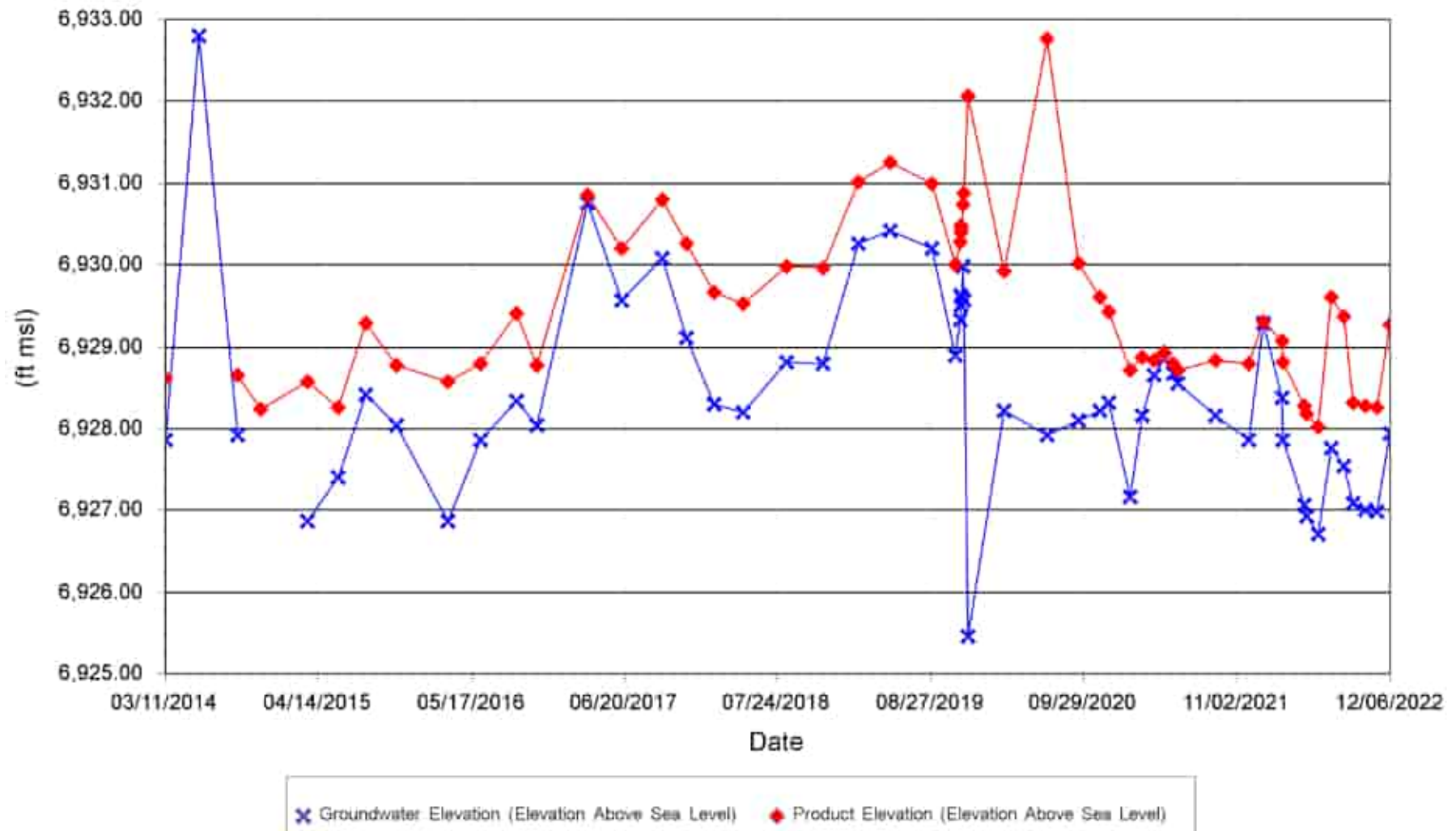
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-05 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-06 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



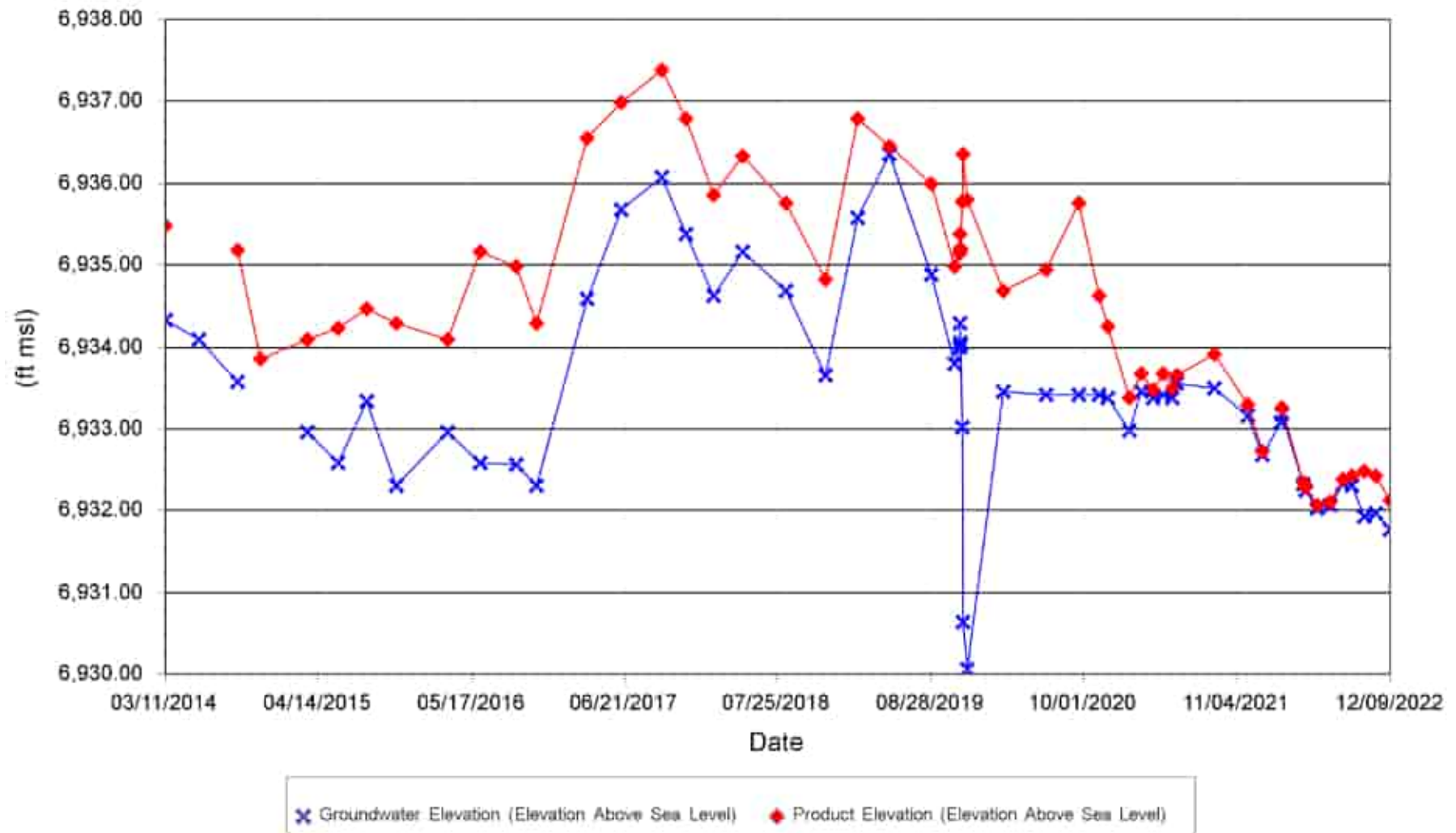
Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

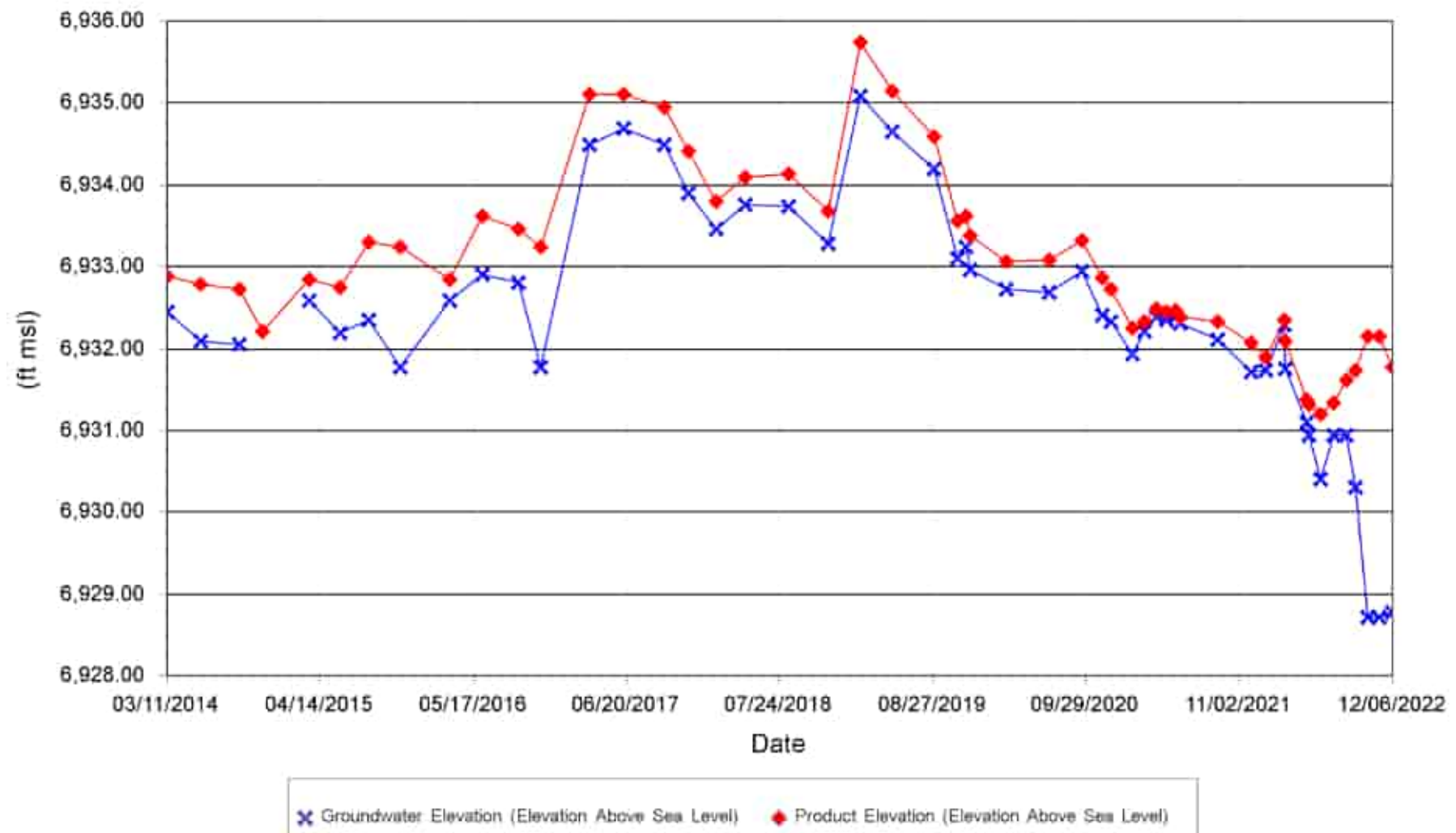
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-07 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-08 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

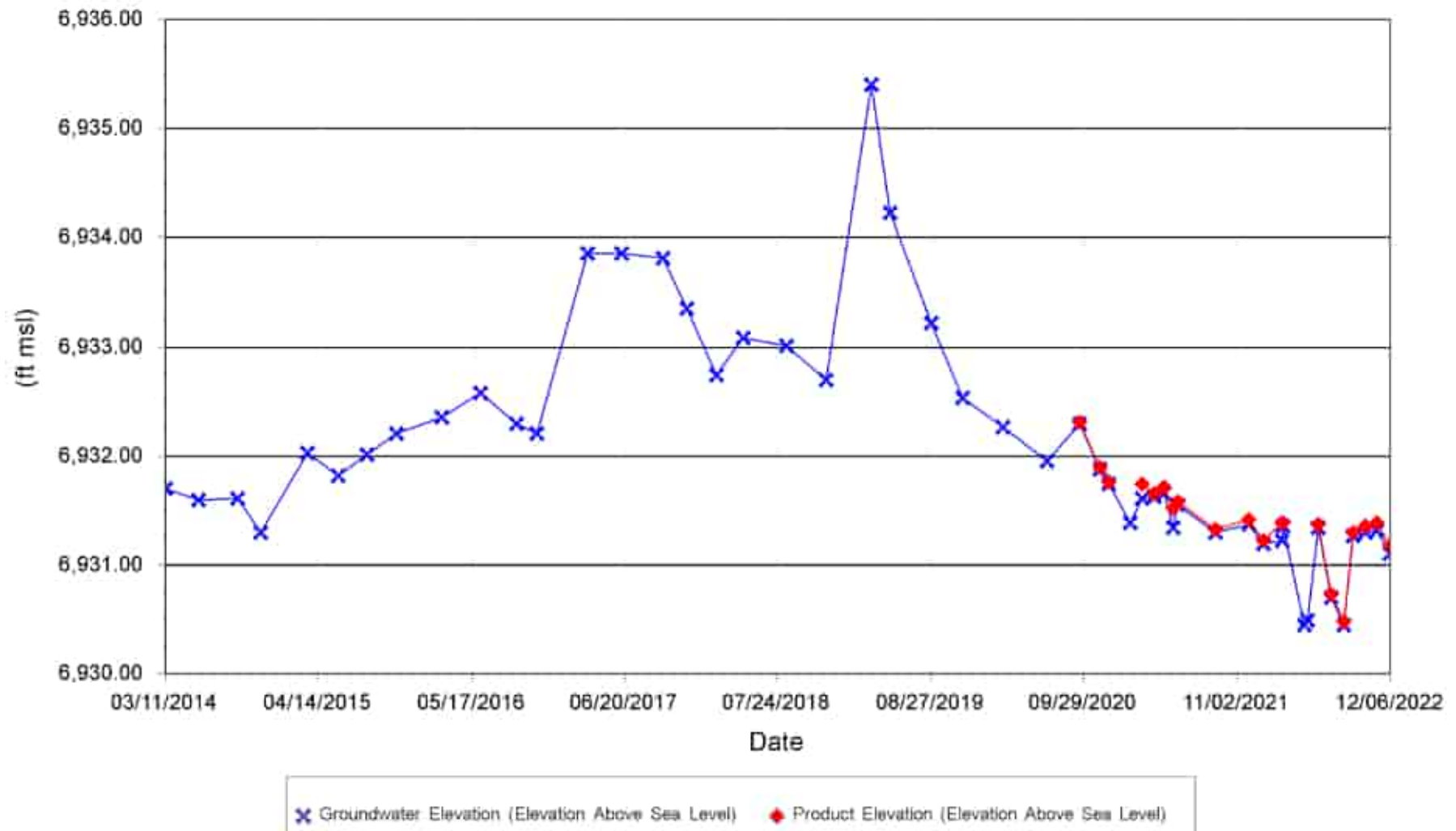


Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

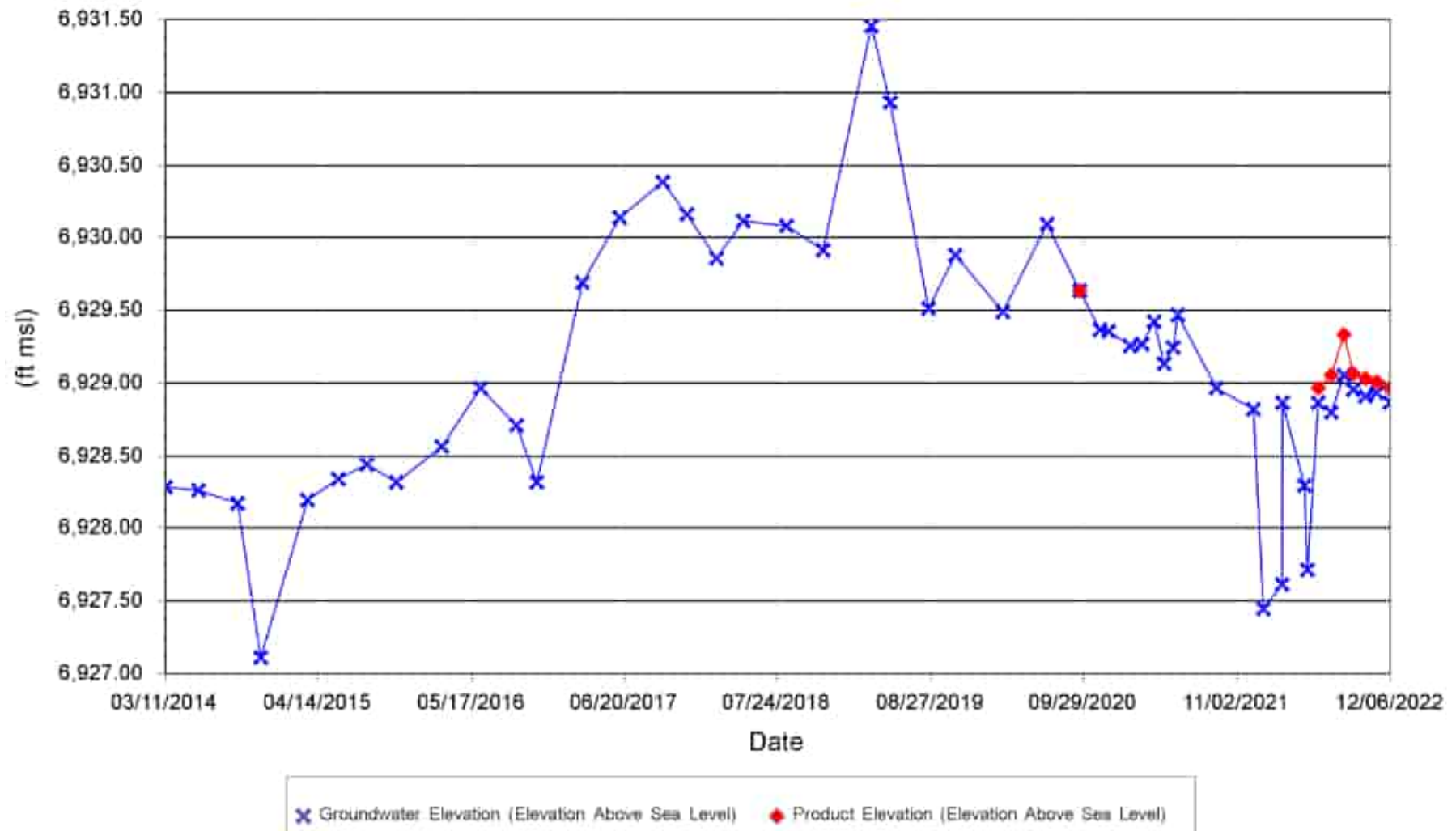
**APPENDIX B-2B. MKTF-09 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-10 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



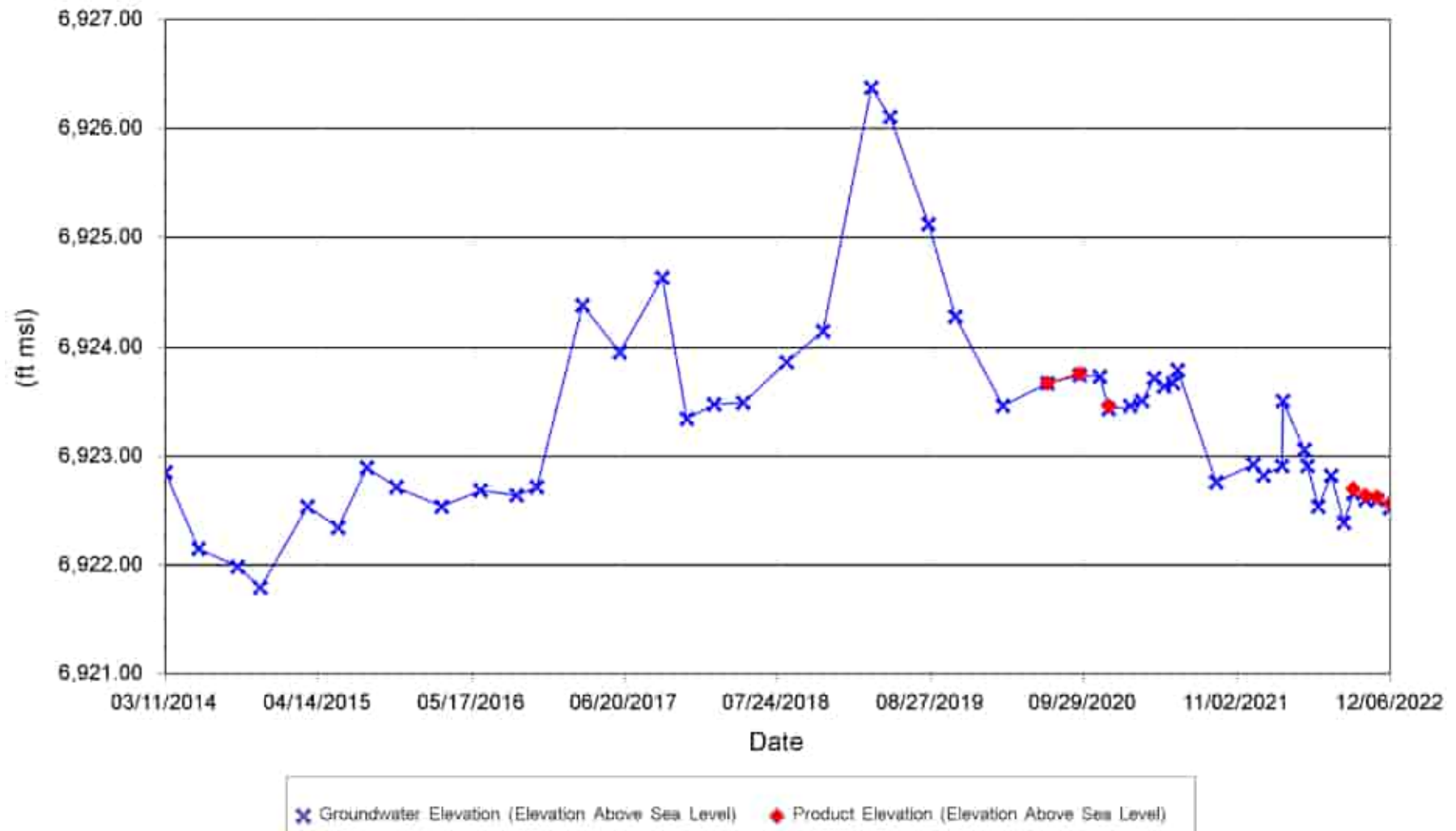
Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

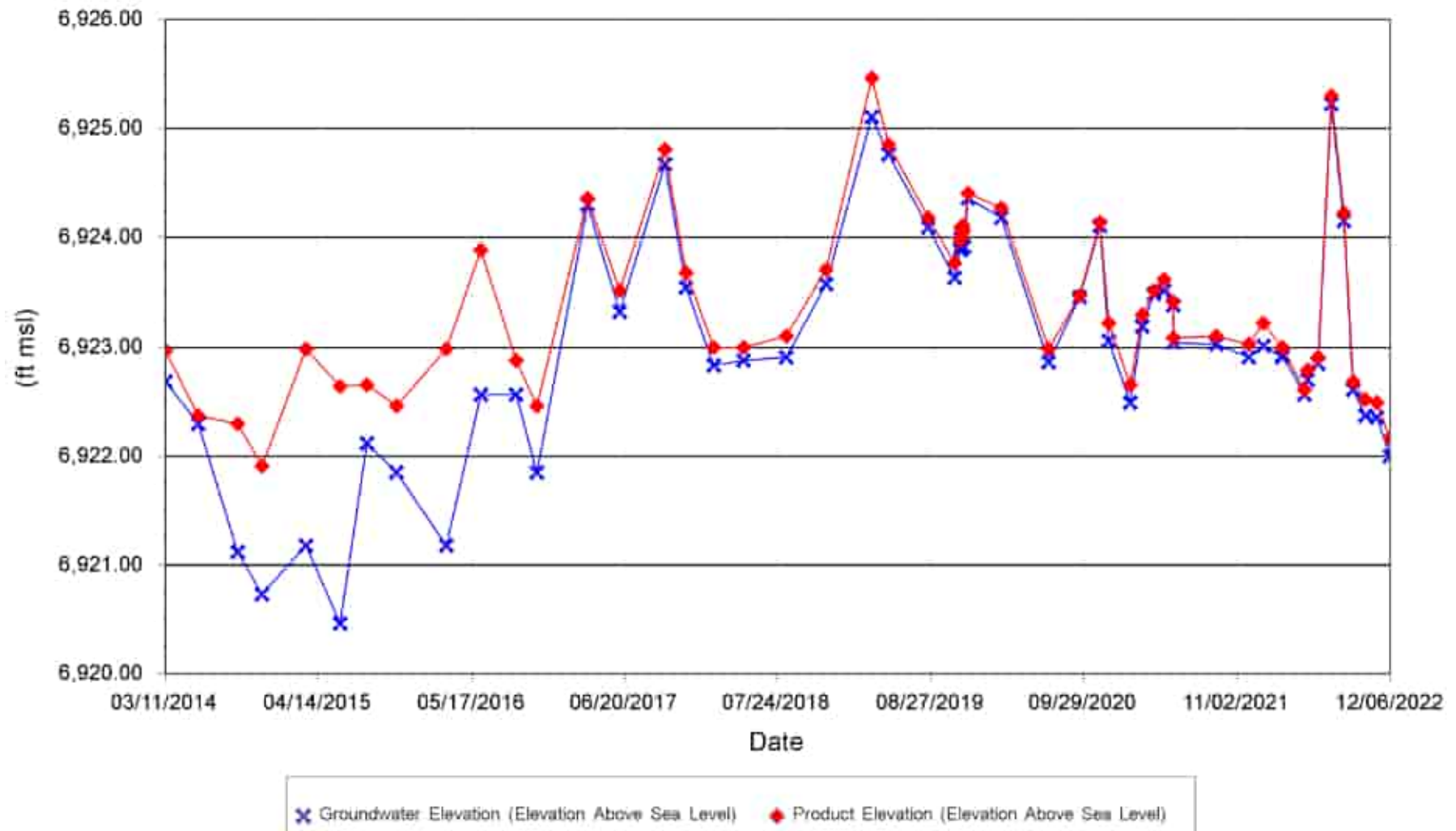
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-11 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-12 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



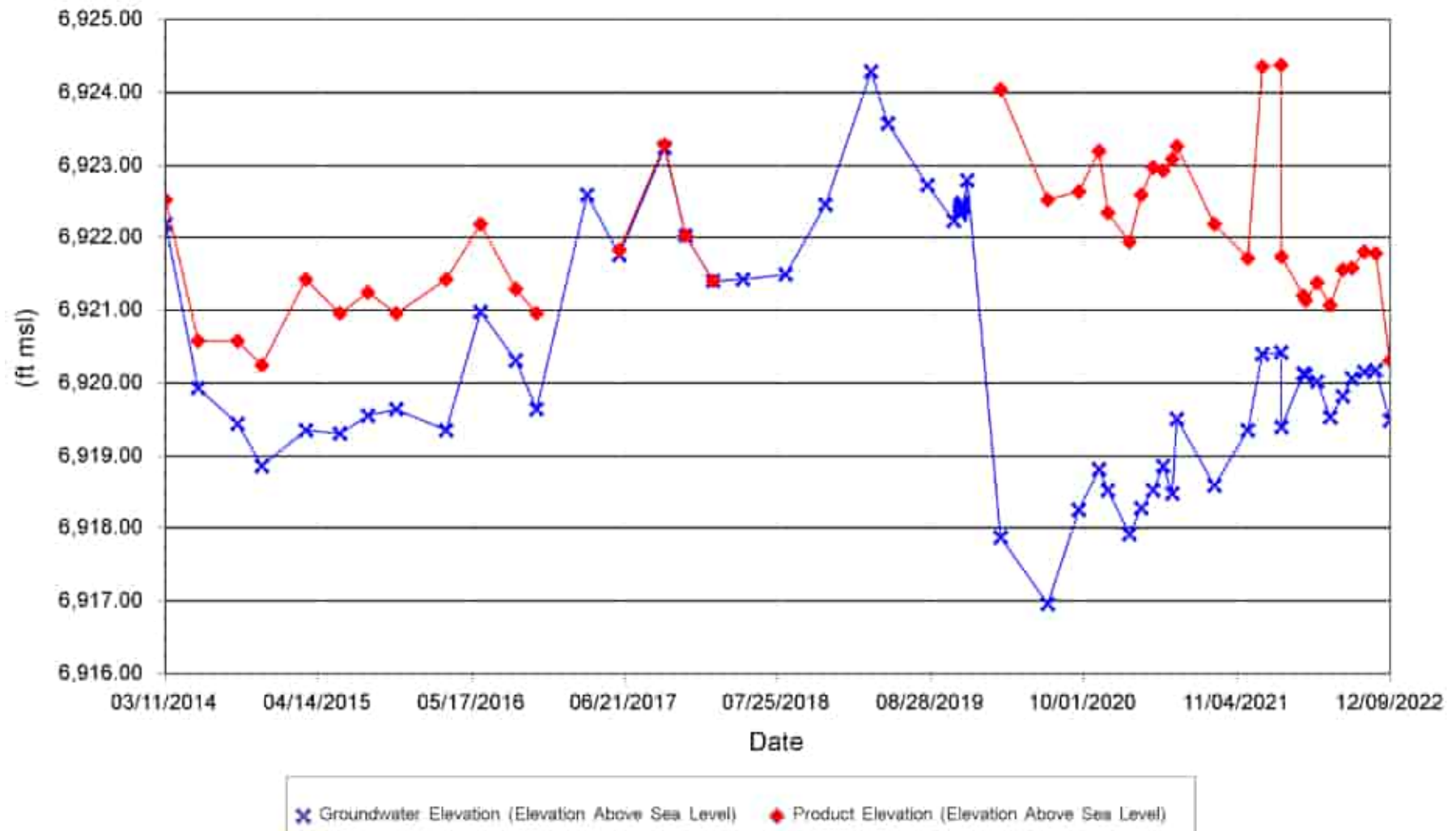
Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

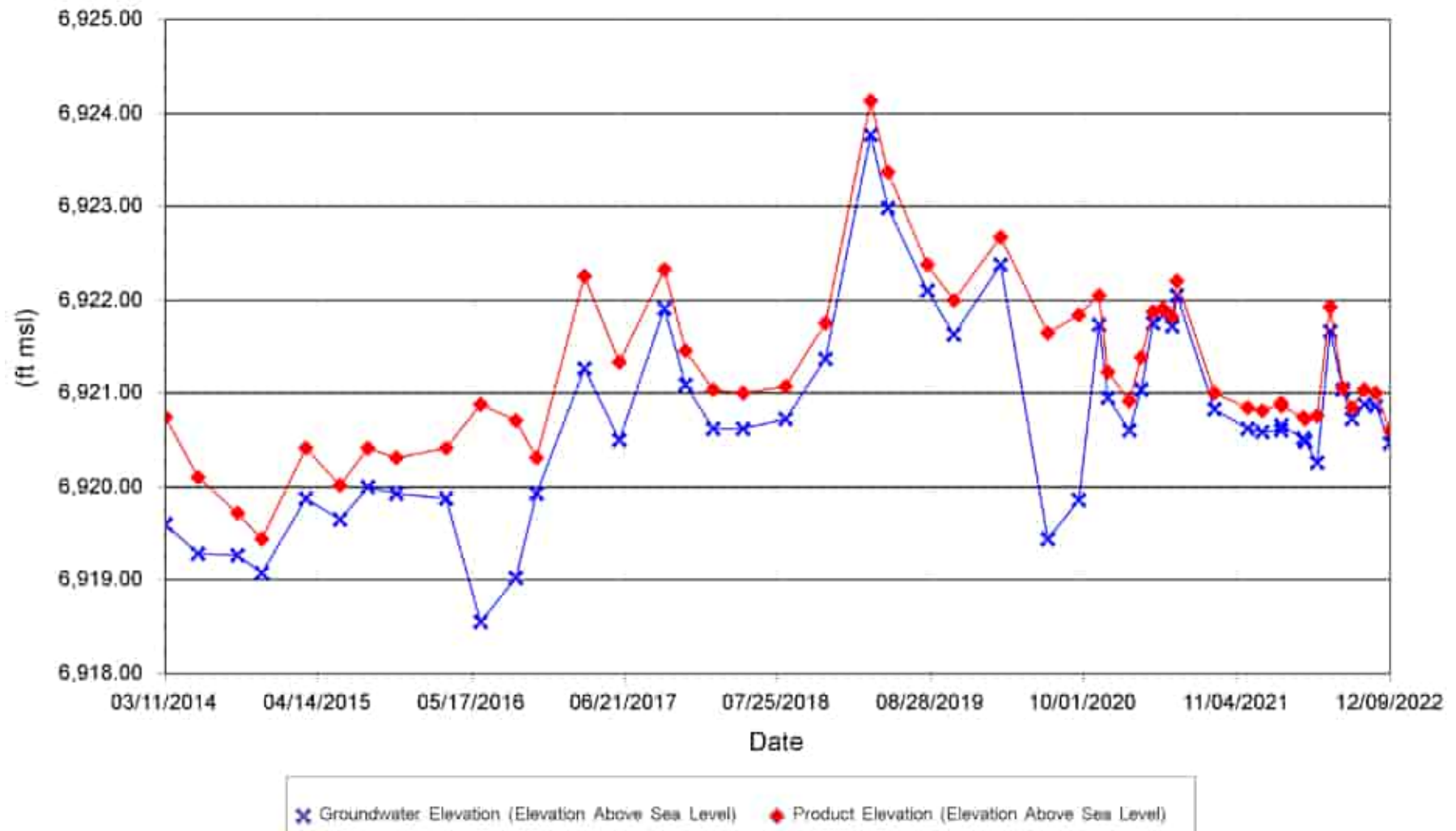
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-13 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



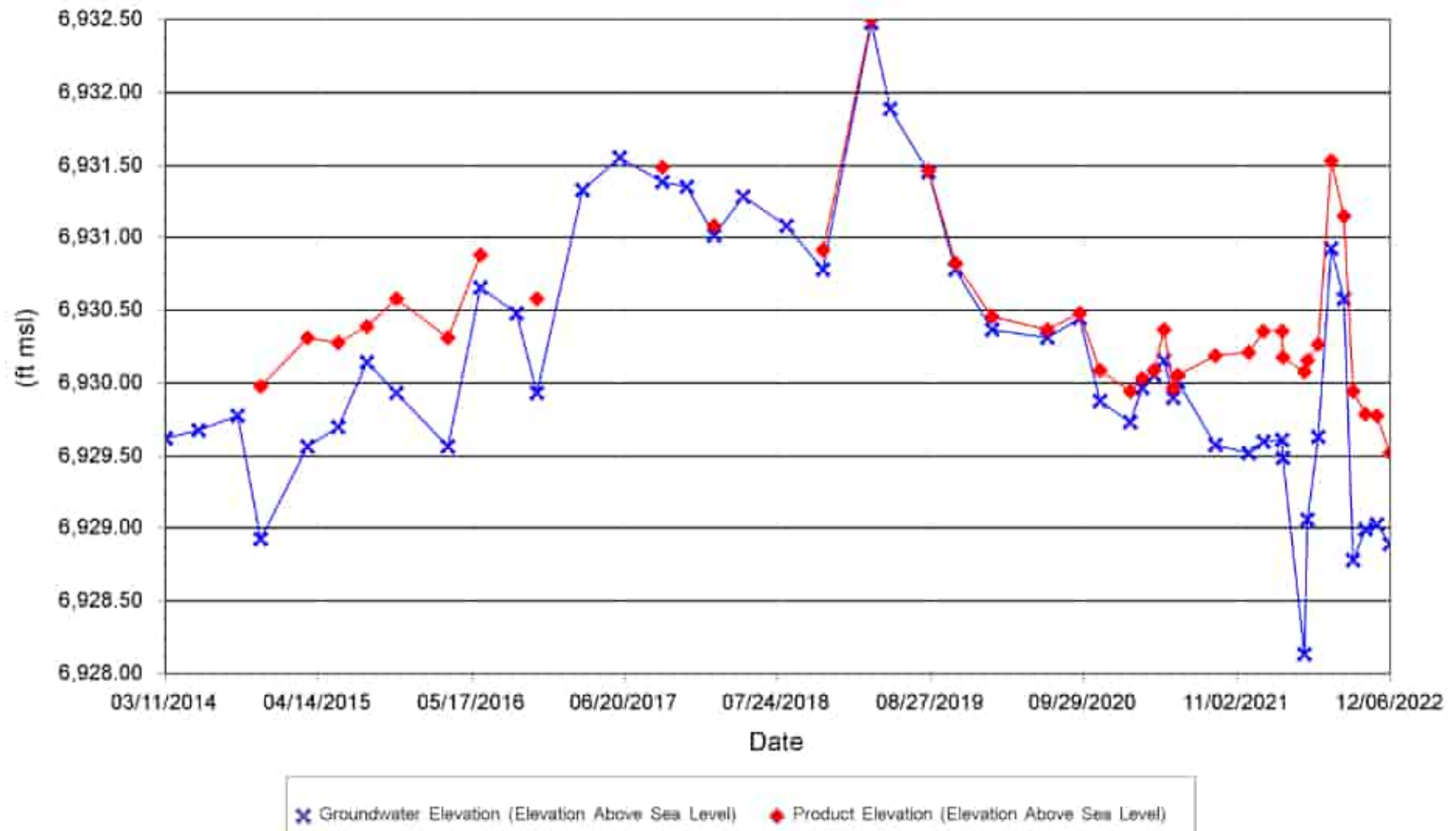
Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-14 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



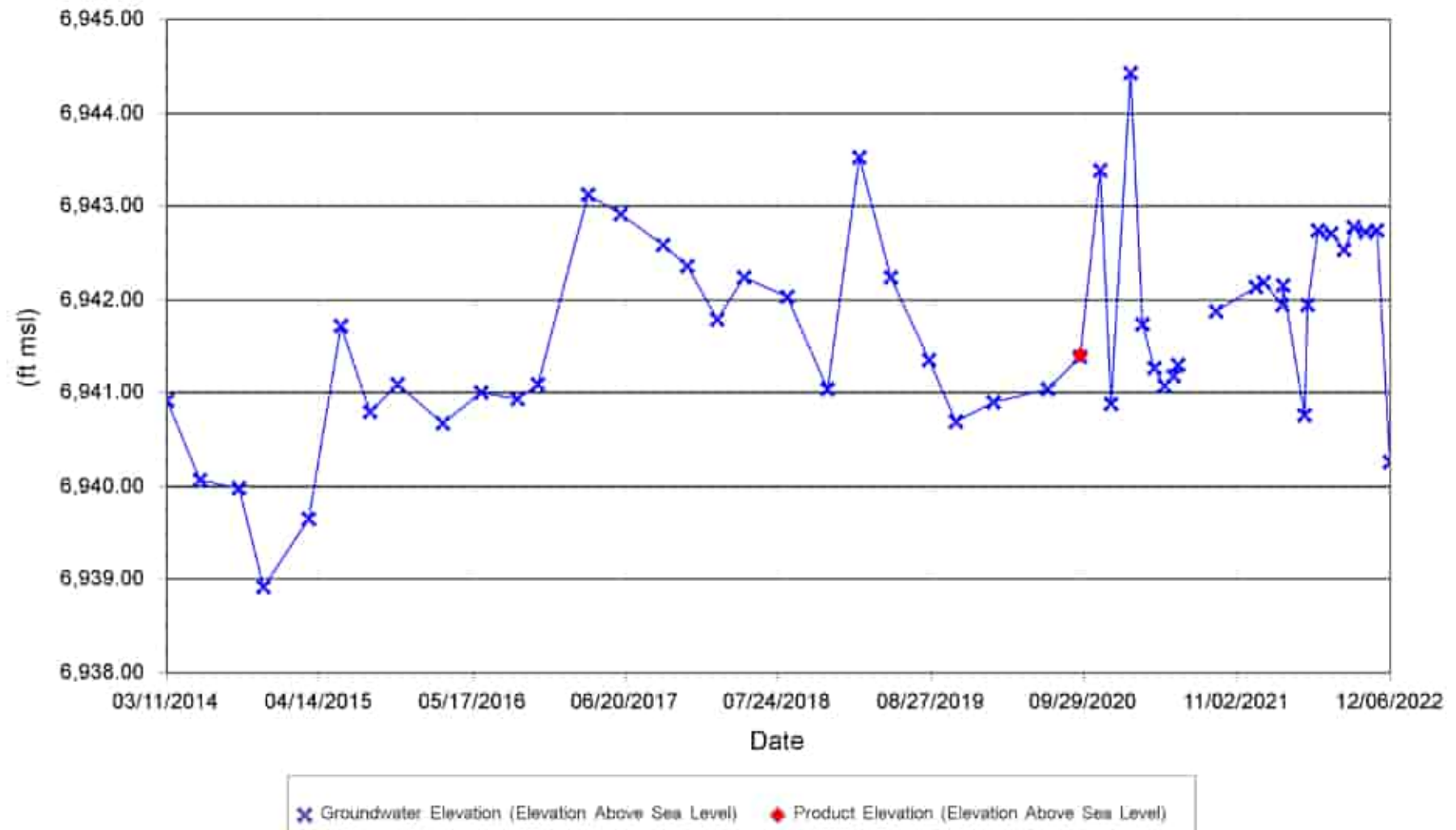
Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-15 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-16 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



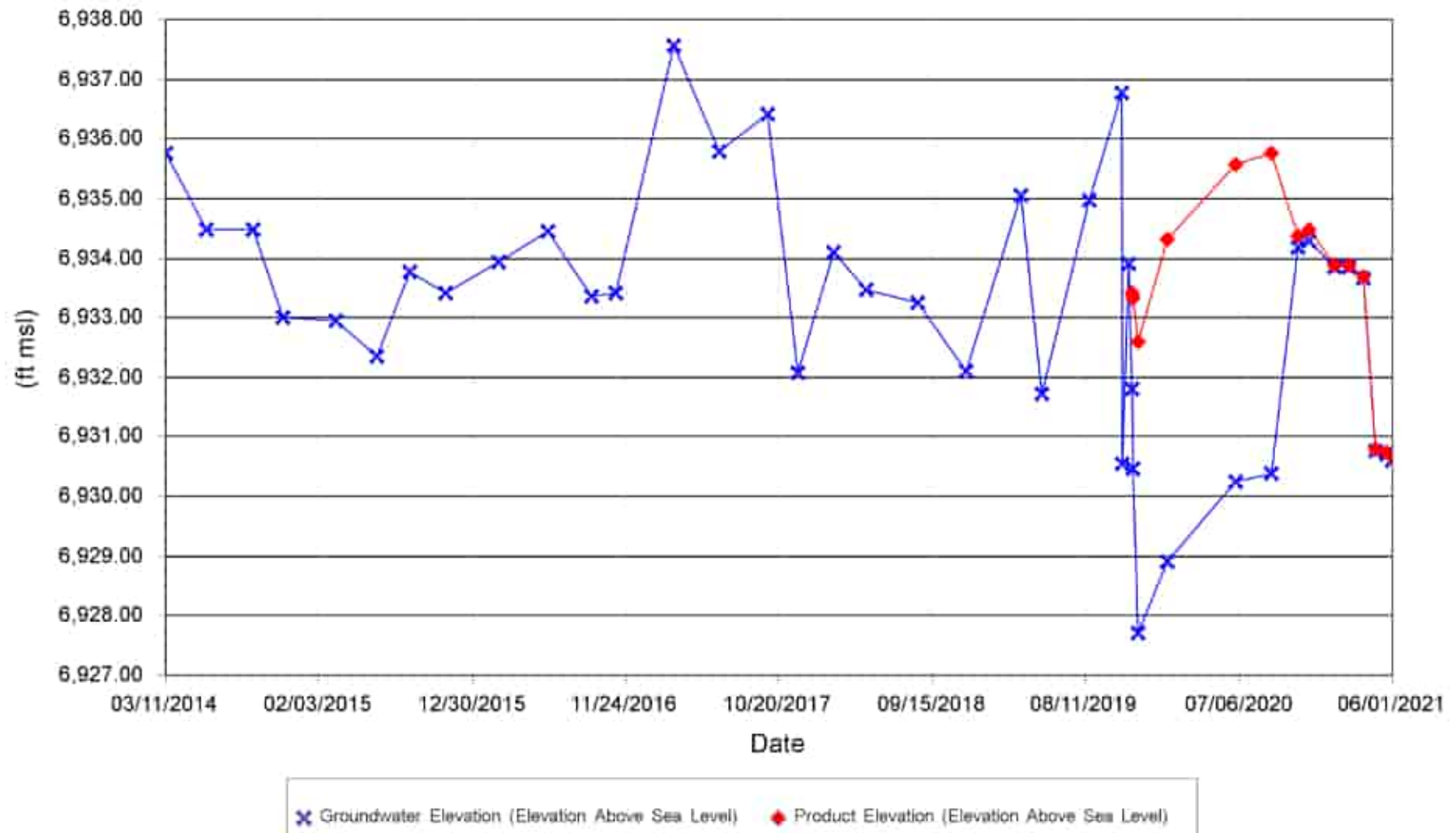
Notes:

SPH - Separate Phase Hydrocarbon

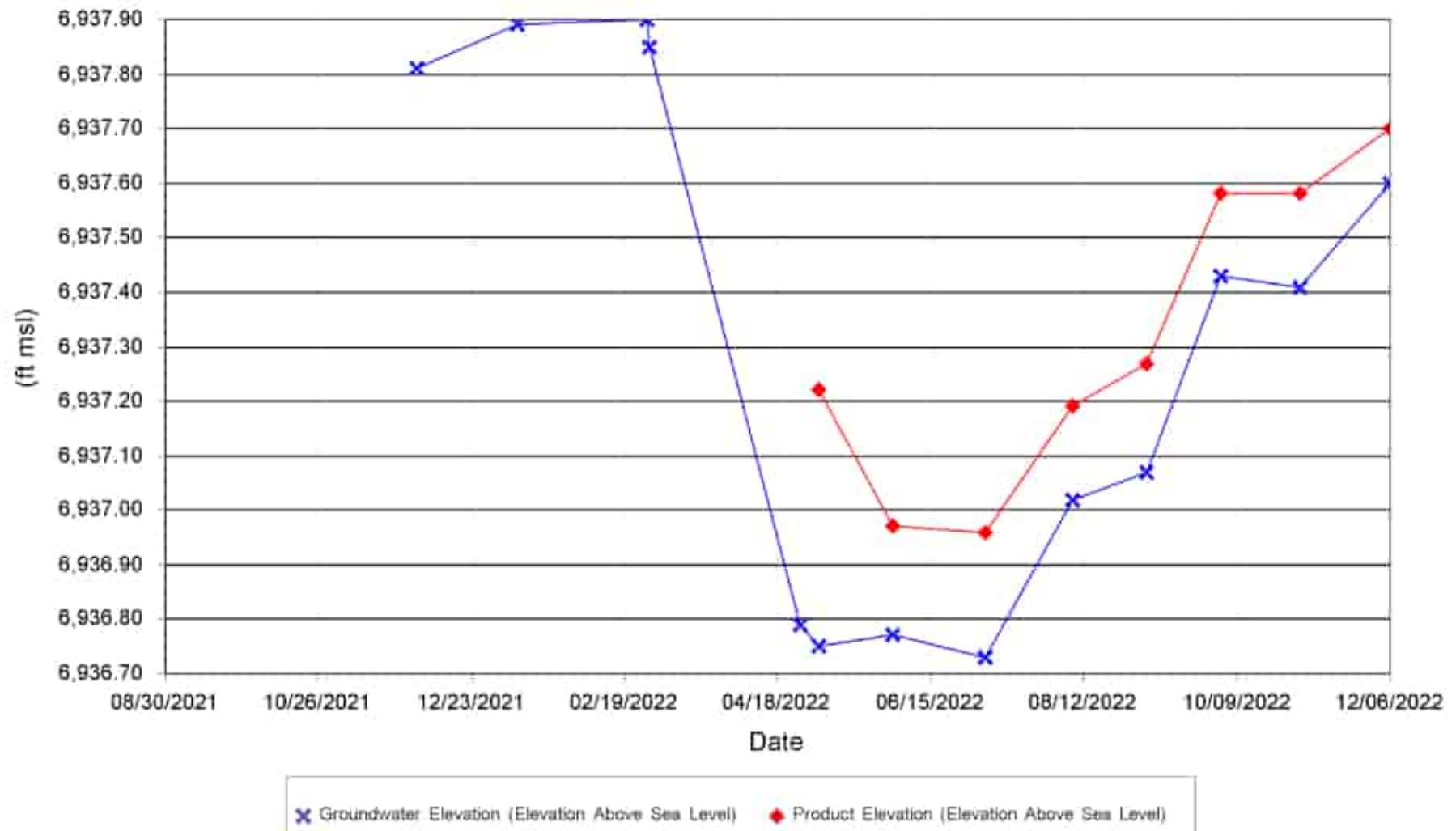
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-17 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-17R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

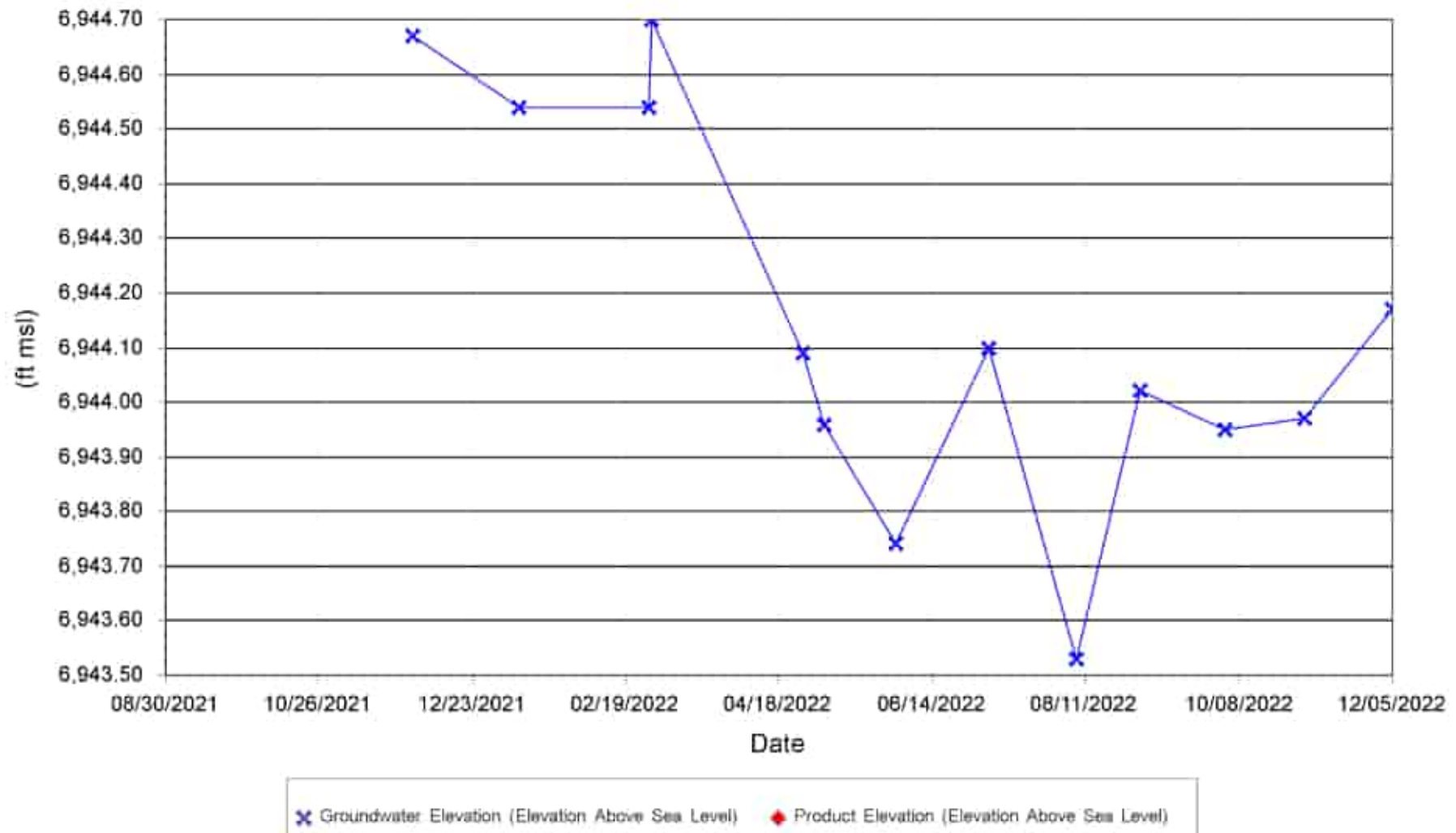
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

The graph displays two data series over time. The 'Groundwater Elevation' series, marked with blue 'x', shows a sharp decline in early 2016, reaching a low of approximately 6,938.8 ft msl, followed by a recovery to a peak of about 6,944.4 ft msl in late 2017. The 'Product Elevation' series, marked with red diamonds, shows a more gradual increase starting in late 2017, peaking at approximately 6,944.4 ft msl in early 2018, and then fluctuating between 6,941.5 and 6,942.2 ft msl through 2021.

| Date | Groundwater Elevation (ft msl) | Product Elevation (ft msl) |
|------------|--------------------------------|----------------------------|
| 03/11/2014 | 6,942.6 | |
| 02/03/2015 | 6,941.2 | |
| 12/30/2015 | 6,942.3 | |
| 11/24/2016 | 6,942.9 | |
| 10/20/2017 | 6,944.3 | 6,944.3 |
| 09/15/2018 | 6,943.5 | |
| 08/11/2019 | 6,942.9 | 6,942.9 |
| 07/06/2020 | 6,941.7 | |
| 06/01/2021 | 6,941.4 | |

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Released to Imaging: 8/14/2026 5:09:31 PM

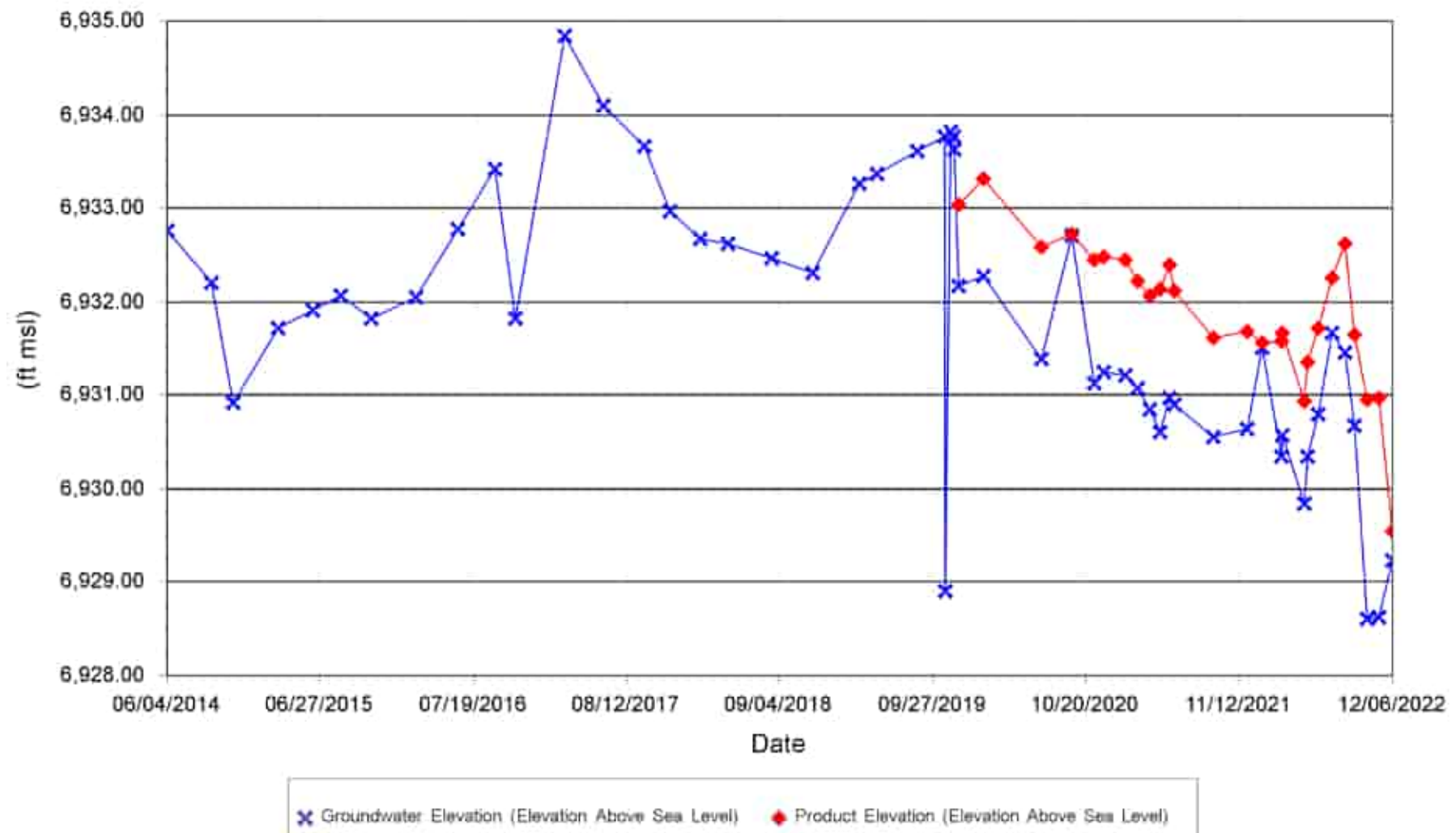
**APPENDIX B-2B. MKTF-18R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-19 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



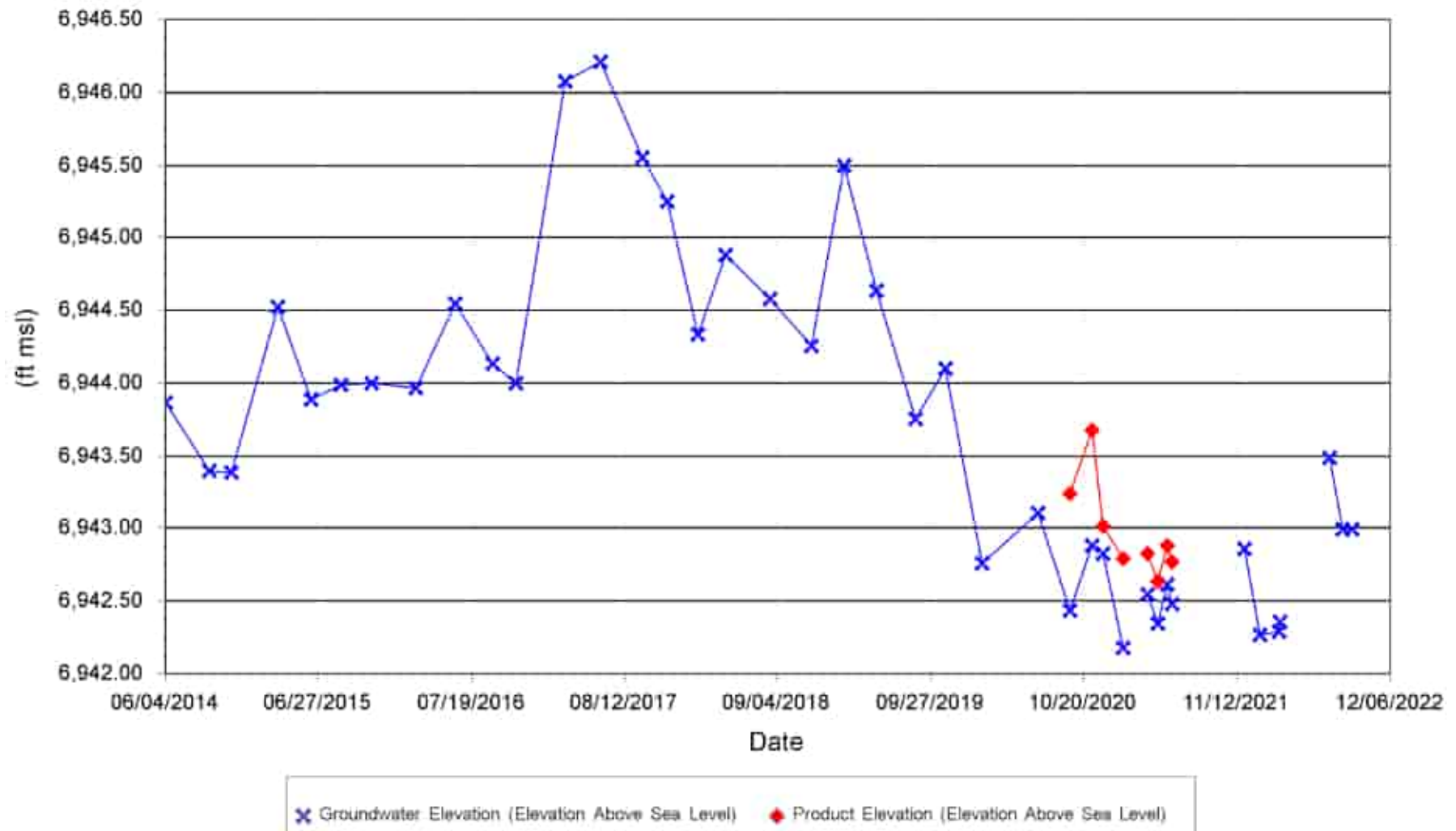
Notes:

SPH - Separate Phase Hydrocarbon

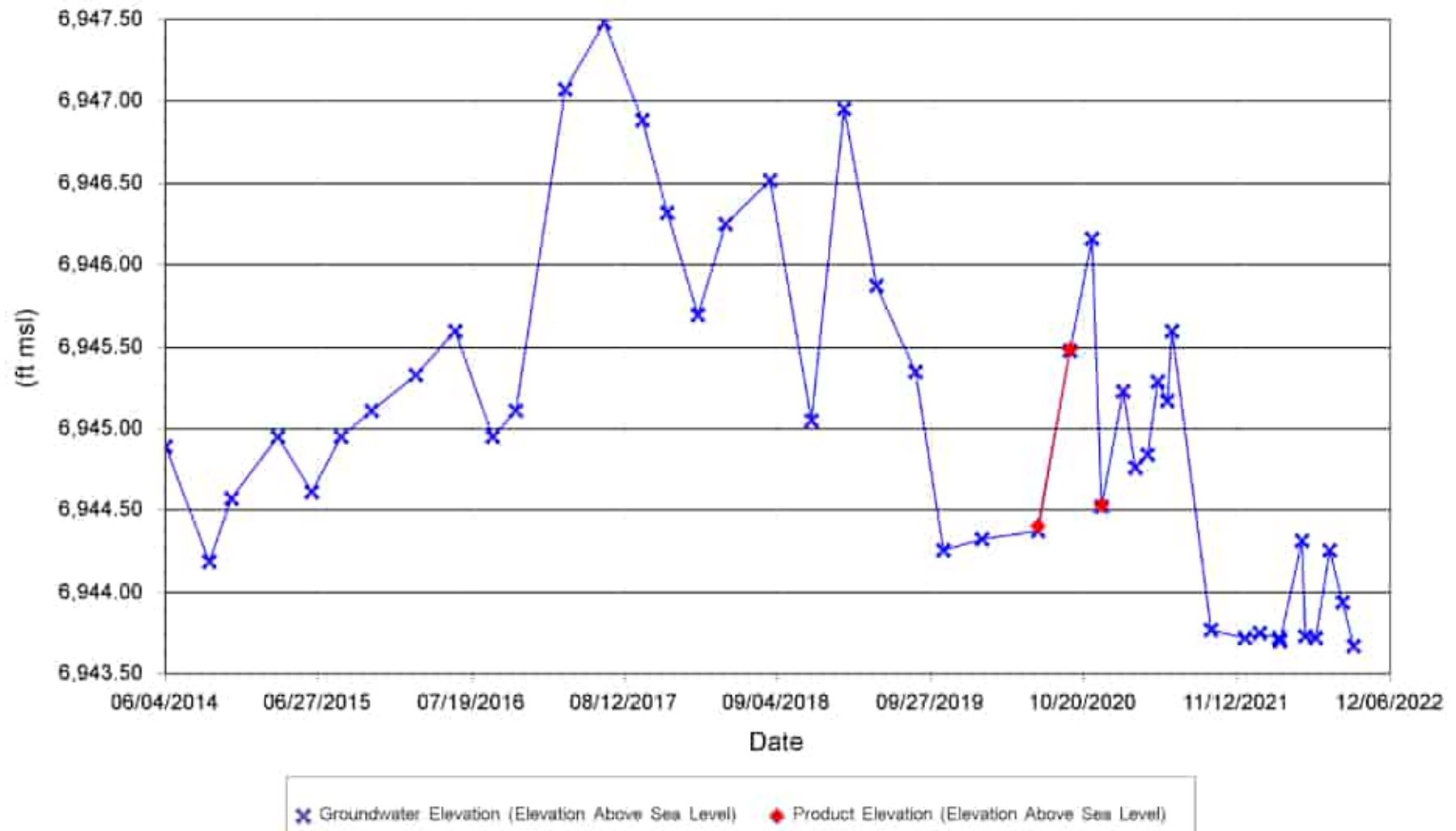
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

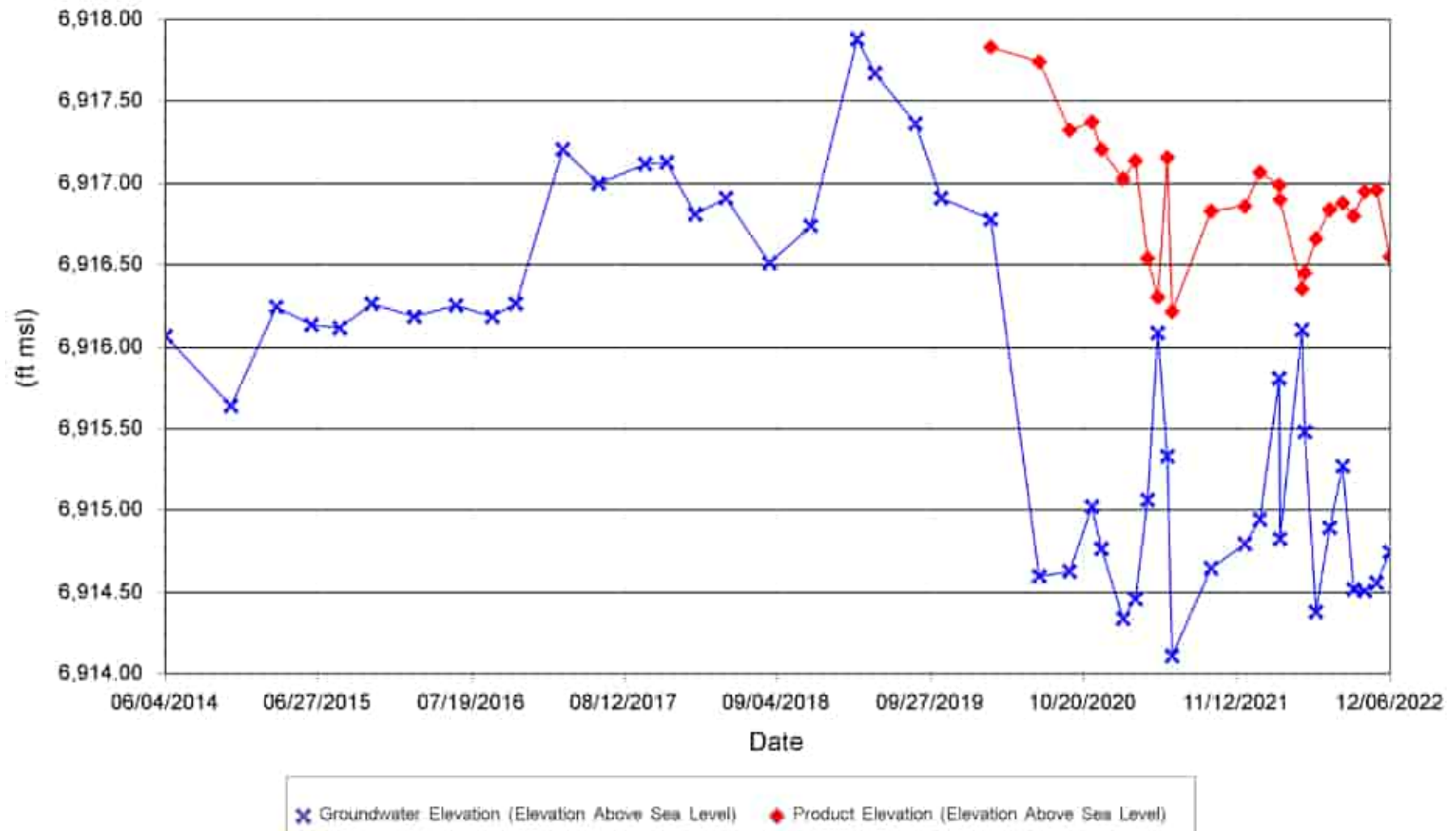
APPENDIX B-2B. MKTF-20 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



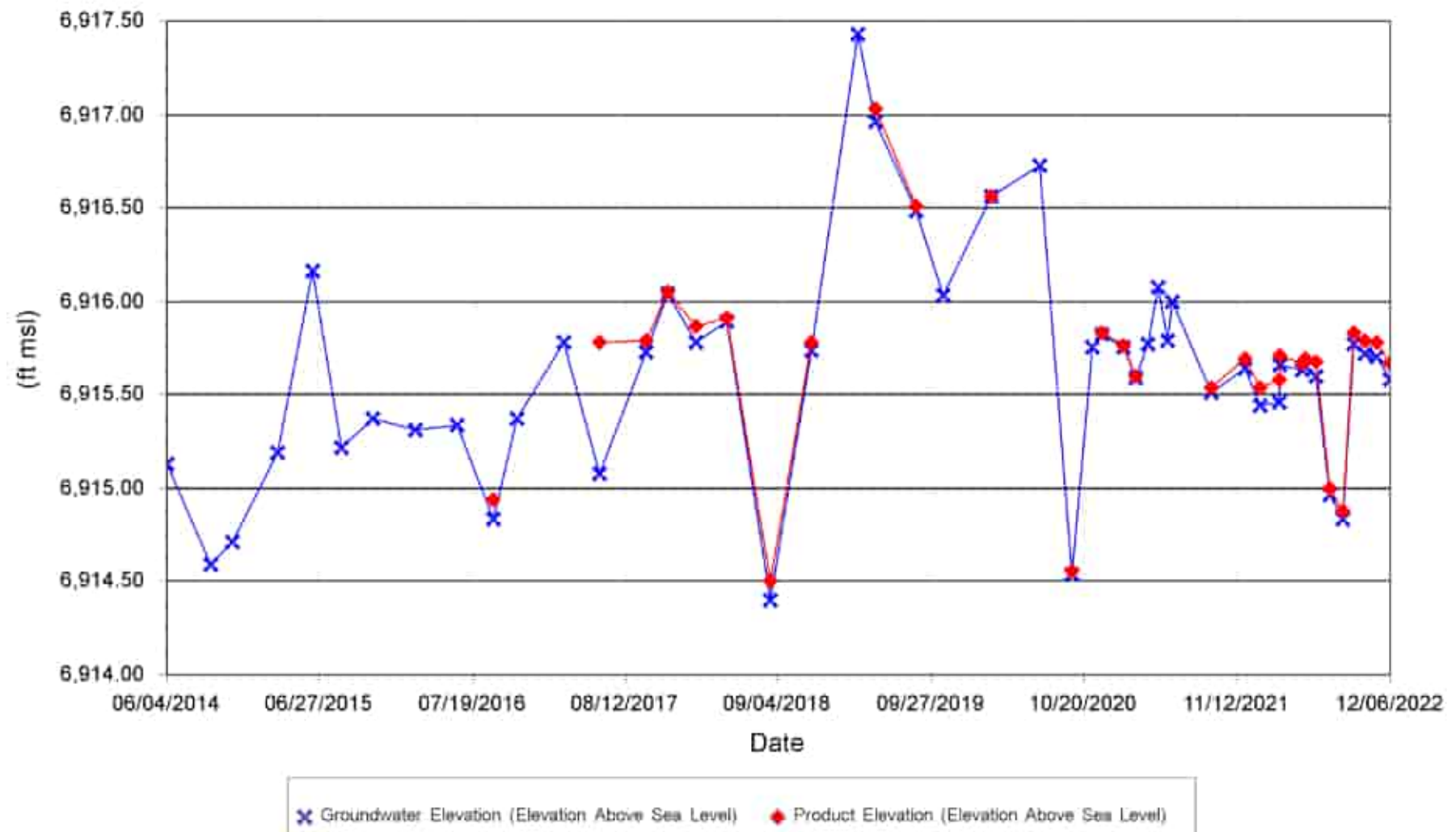
APPENDIX B-2B. MKTF-21 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



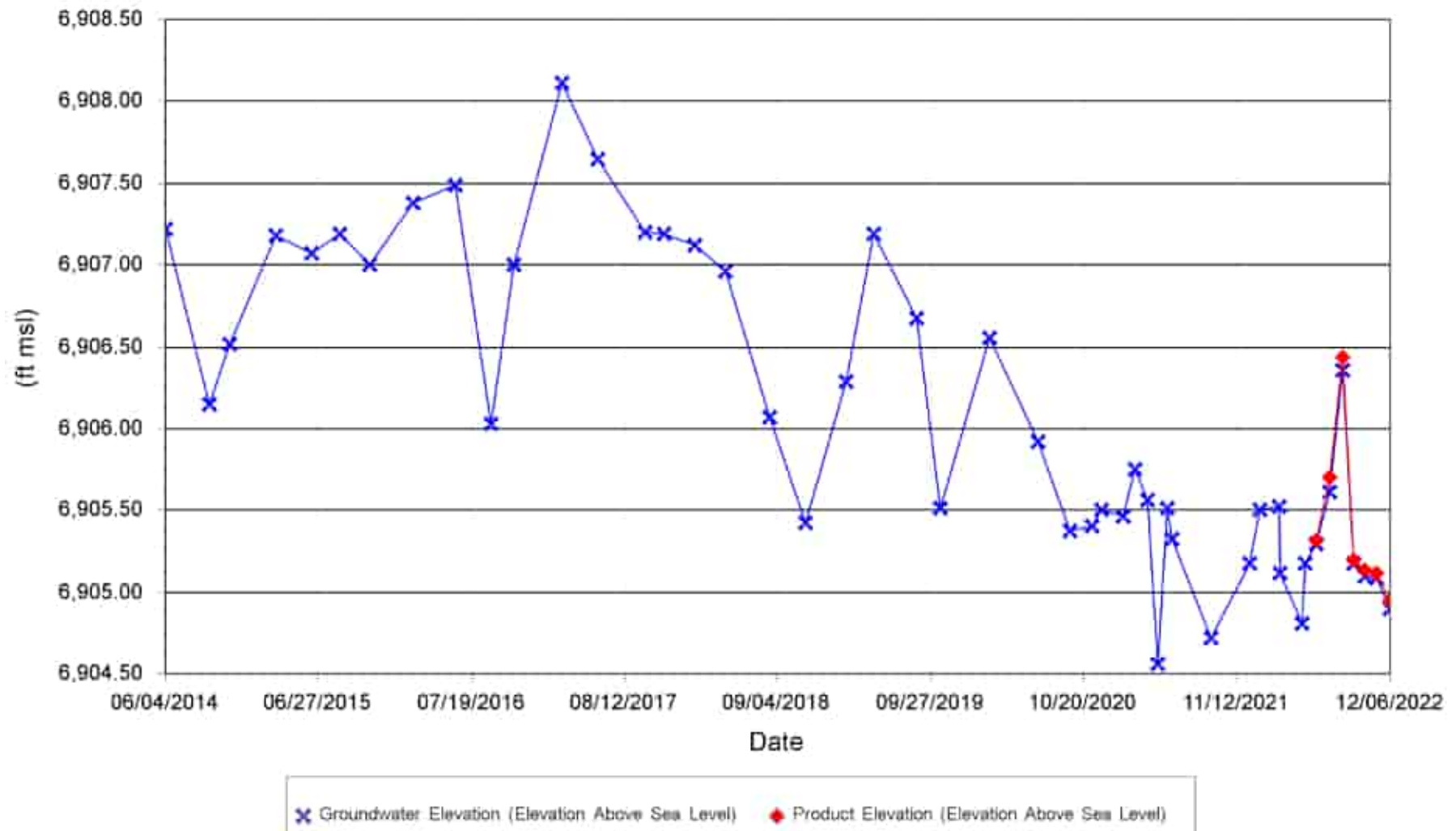
APPENDIX B-2B. MKTF-22 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

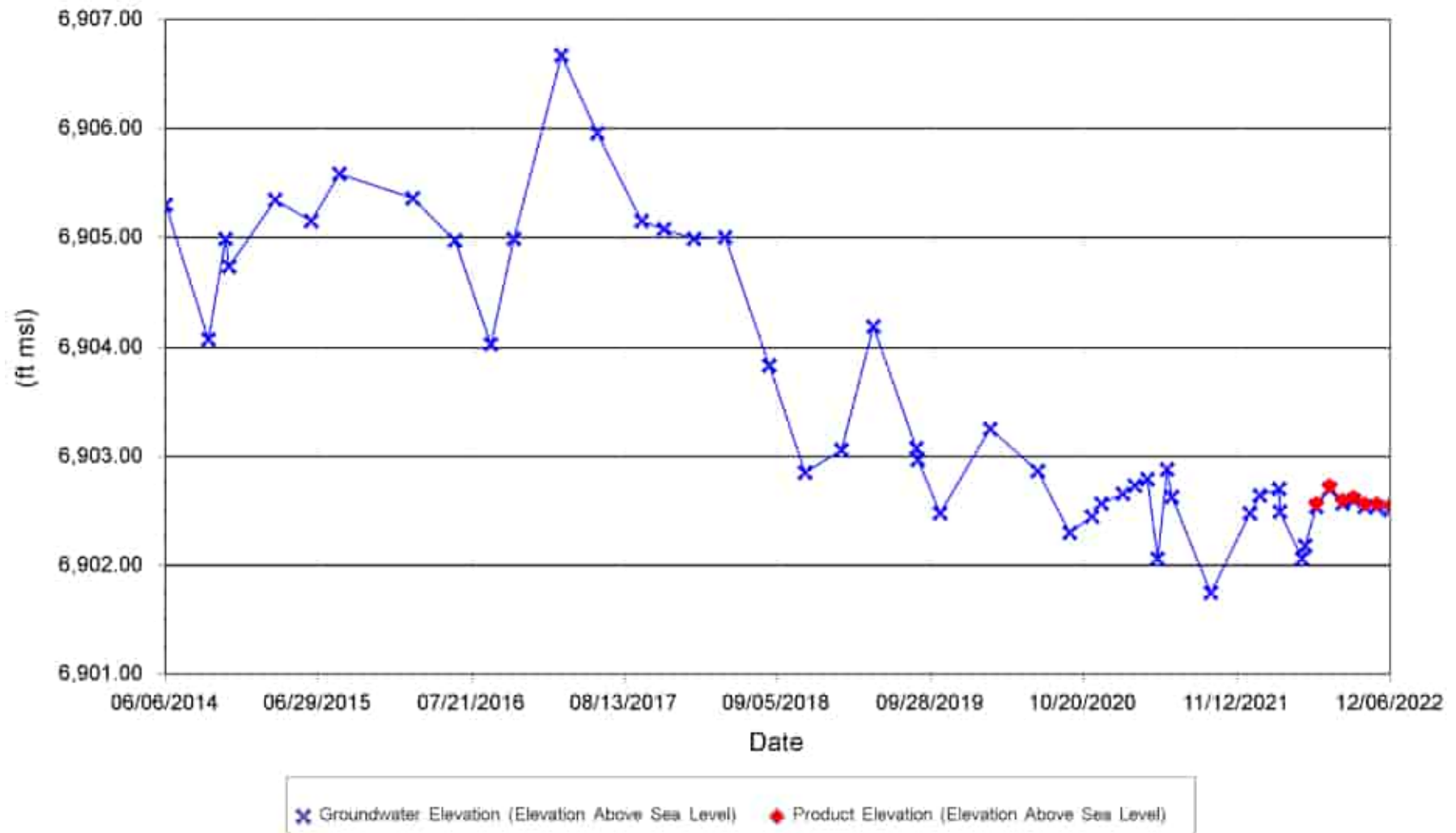


Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

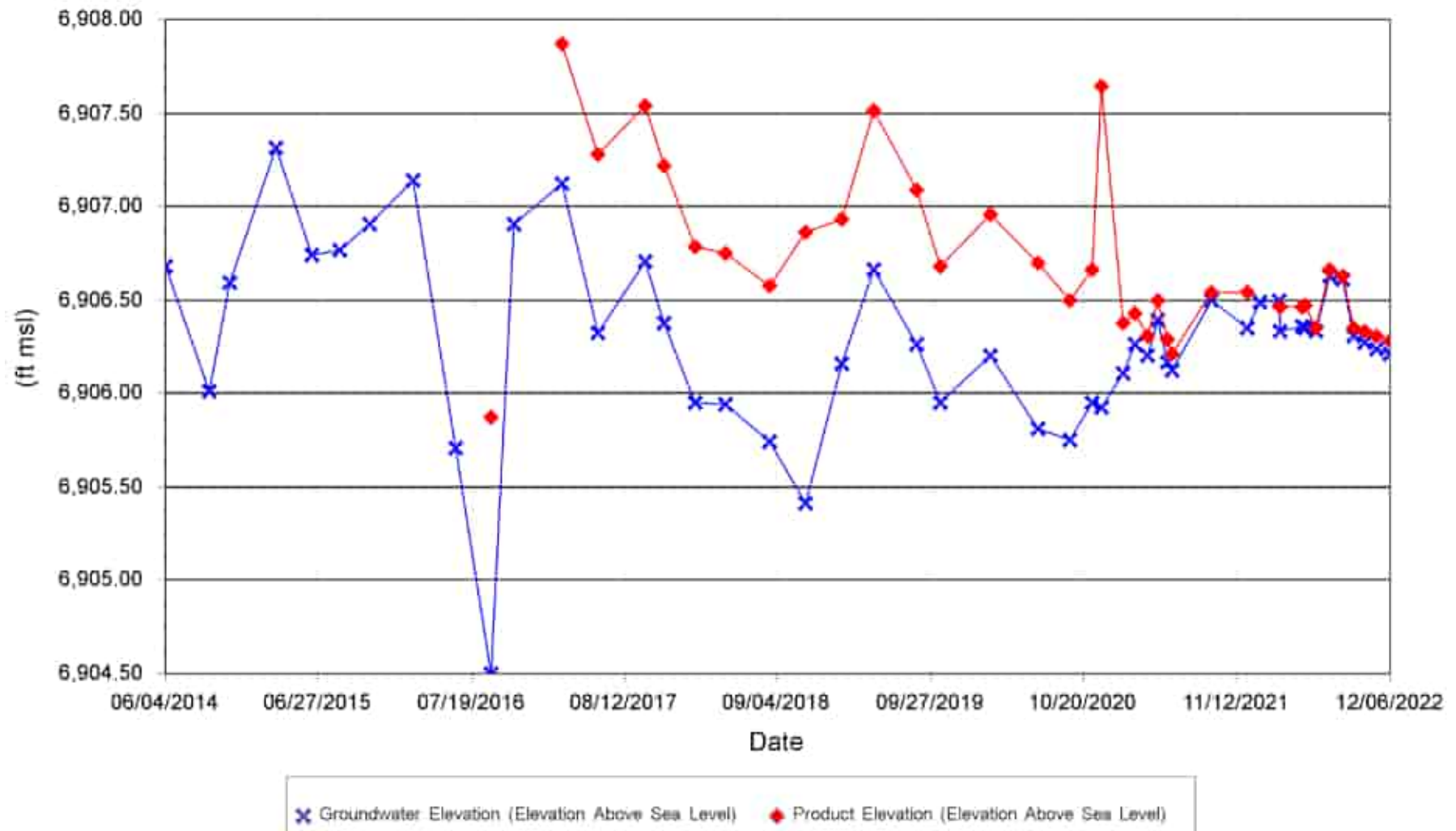
**APPENDIX B-2B. MKTF-23 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-24 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

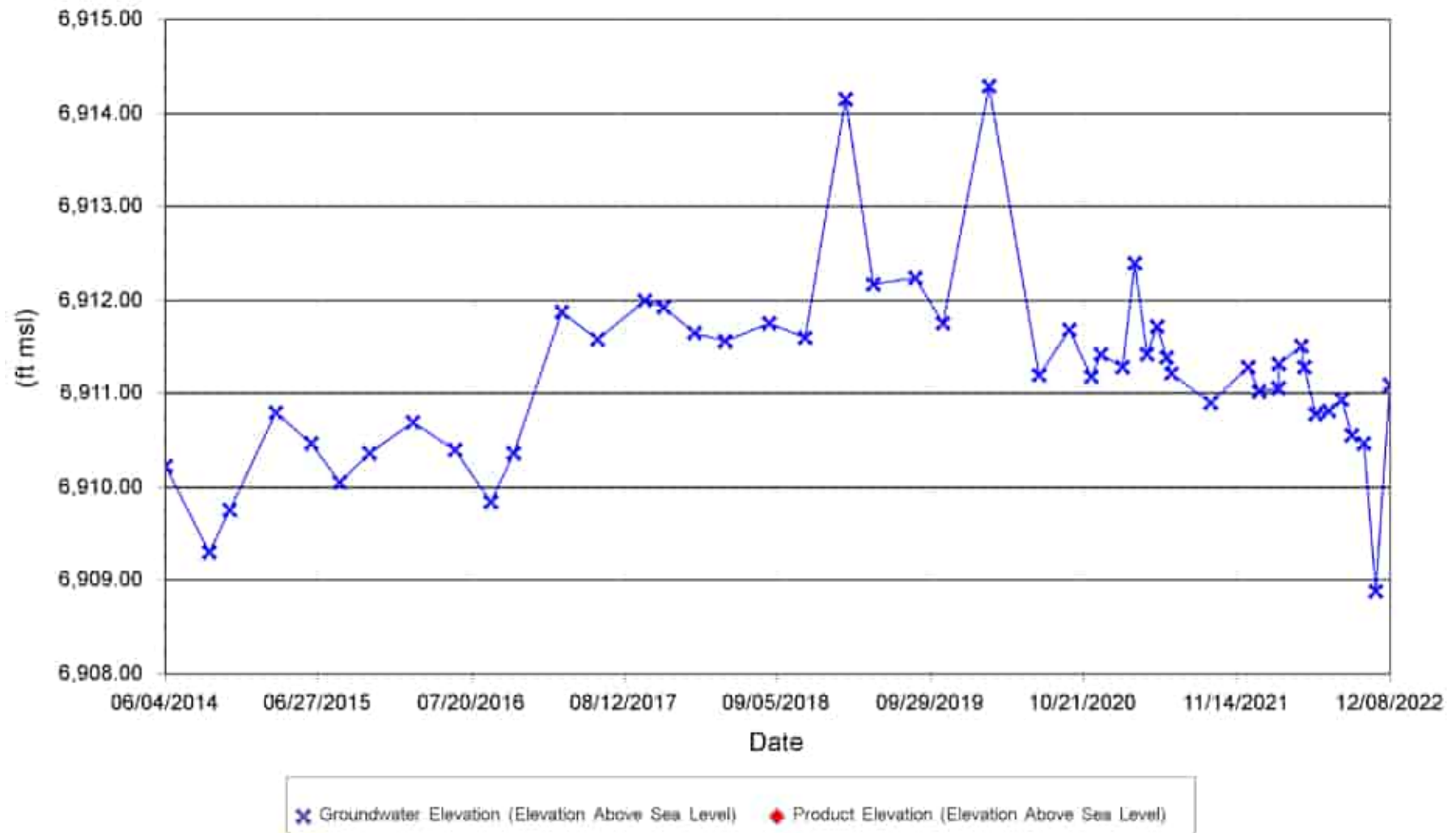
**APPENDIX B-2B. MKTF-25 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

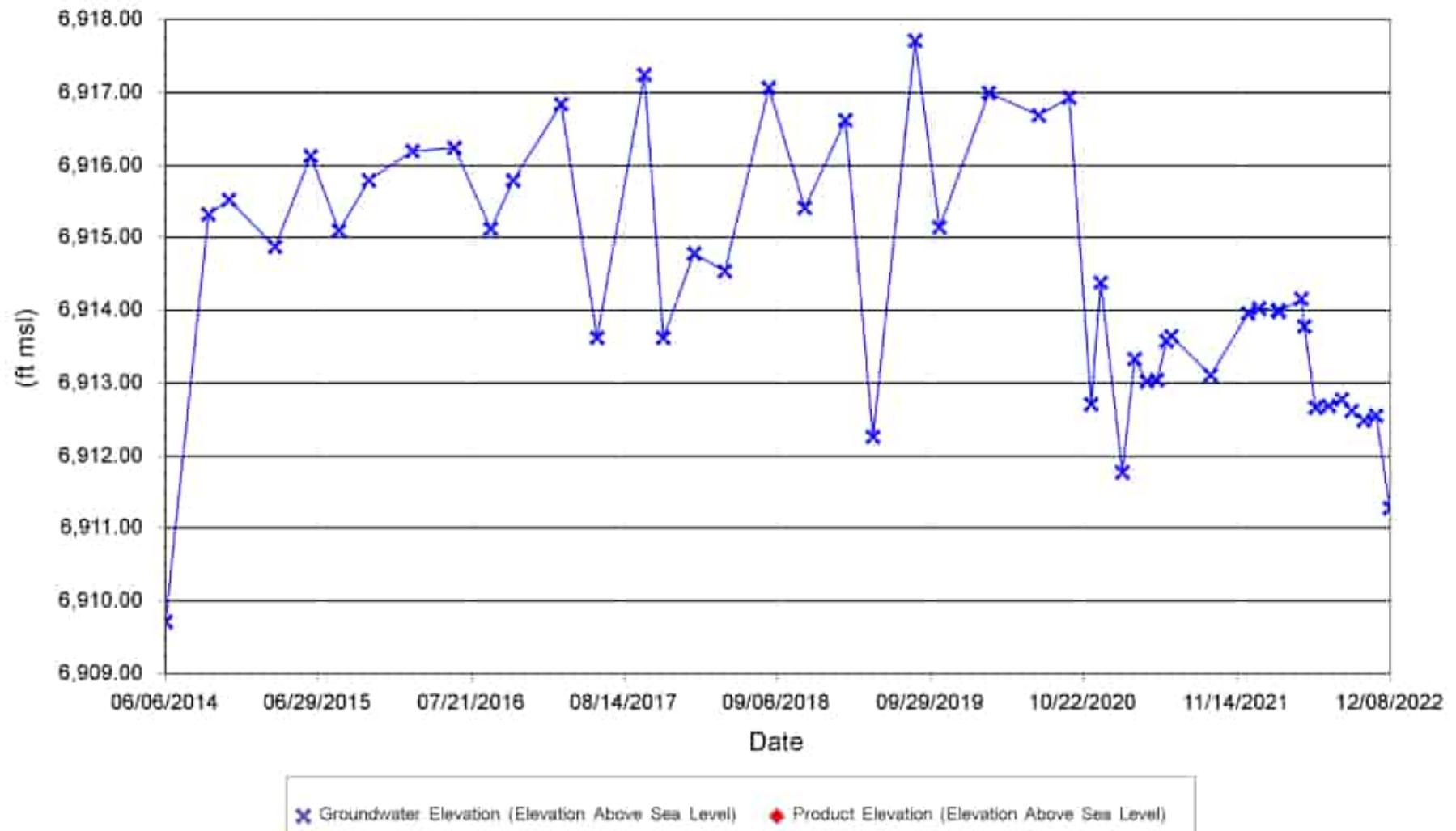
APPENDIX B-2B. MKTF-26 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

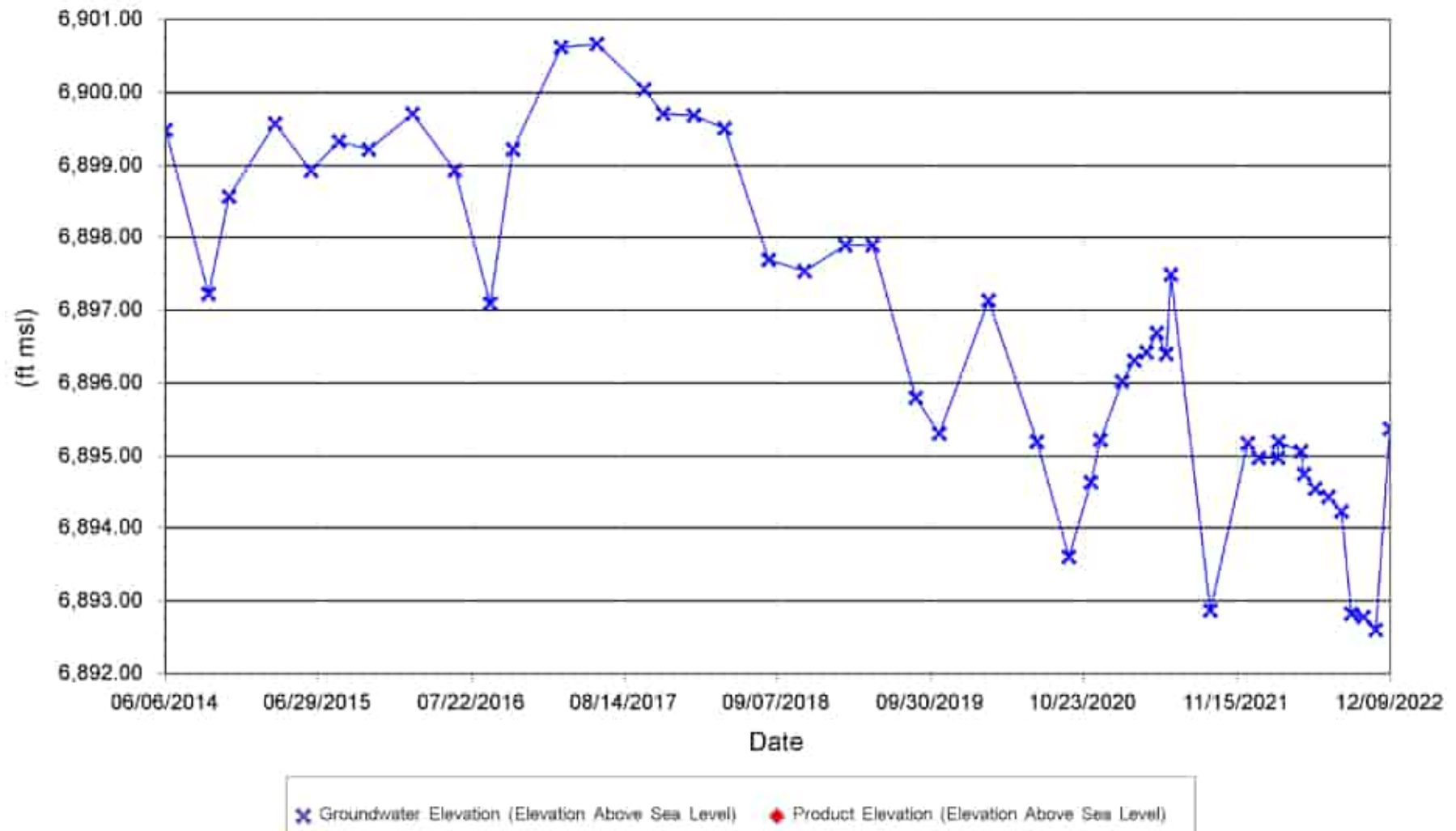


Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

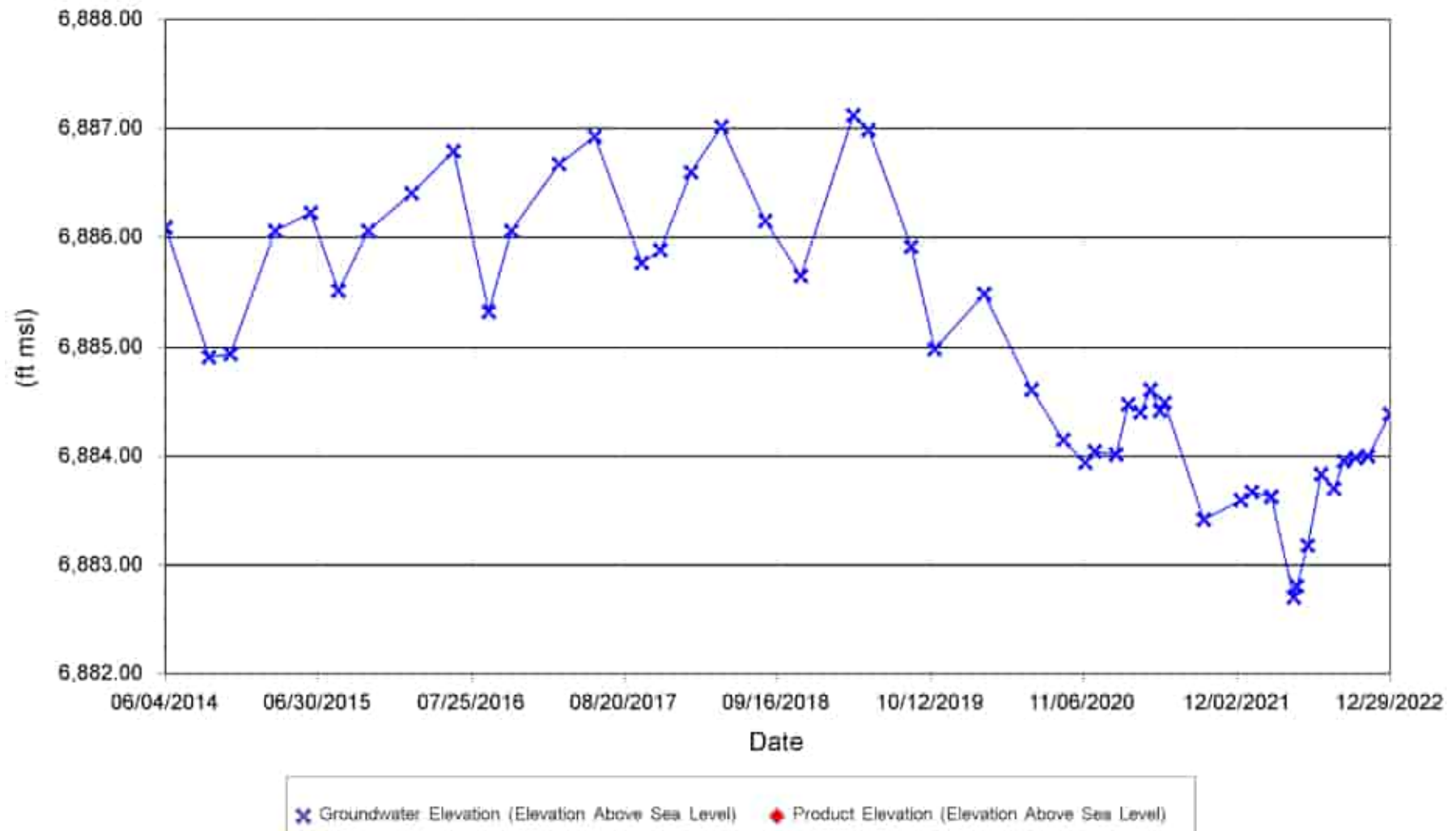
APPENDIX B-2B. MKTF-27 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



**APPENDIX B-2B. MKTF-28 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

**APPENDIX B-2B. MKTF-29 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

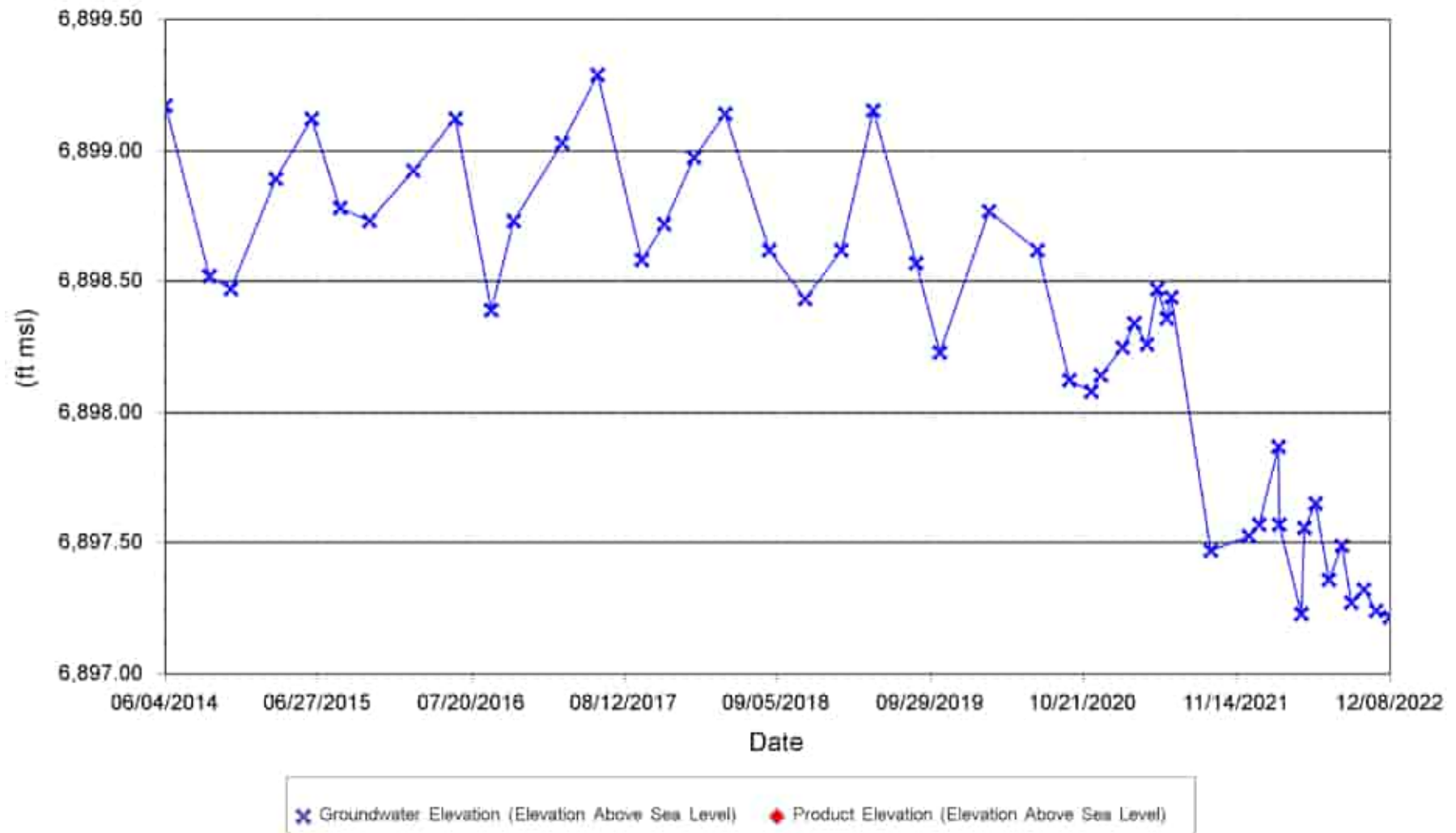
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

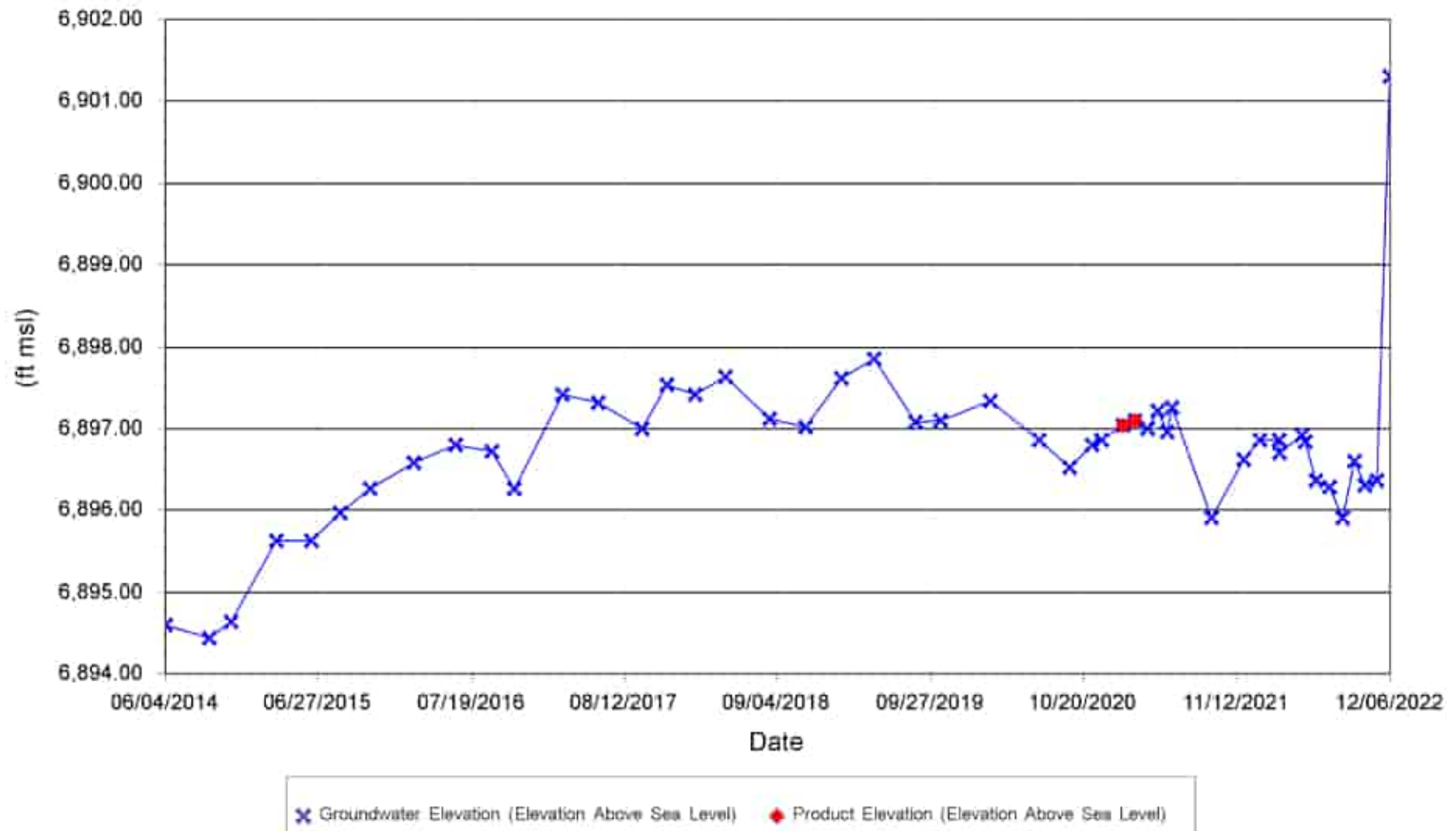
**APPENDIX B-2B. MKTF-30 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

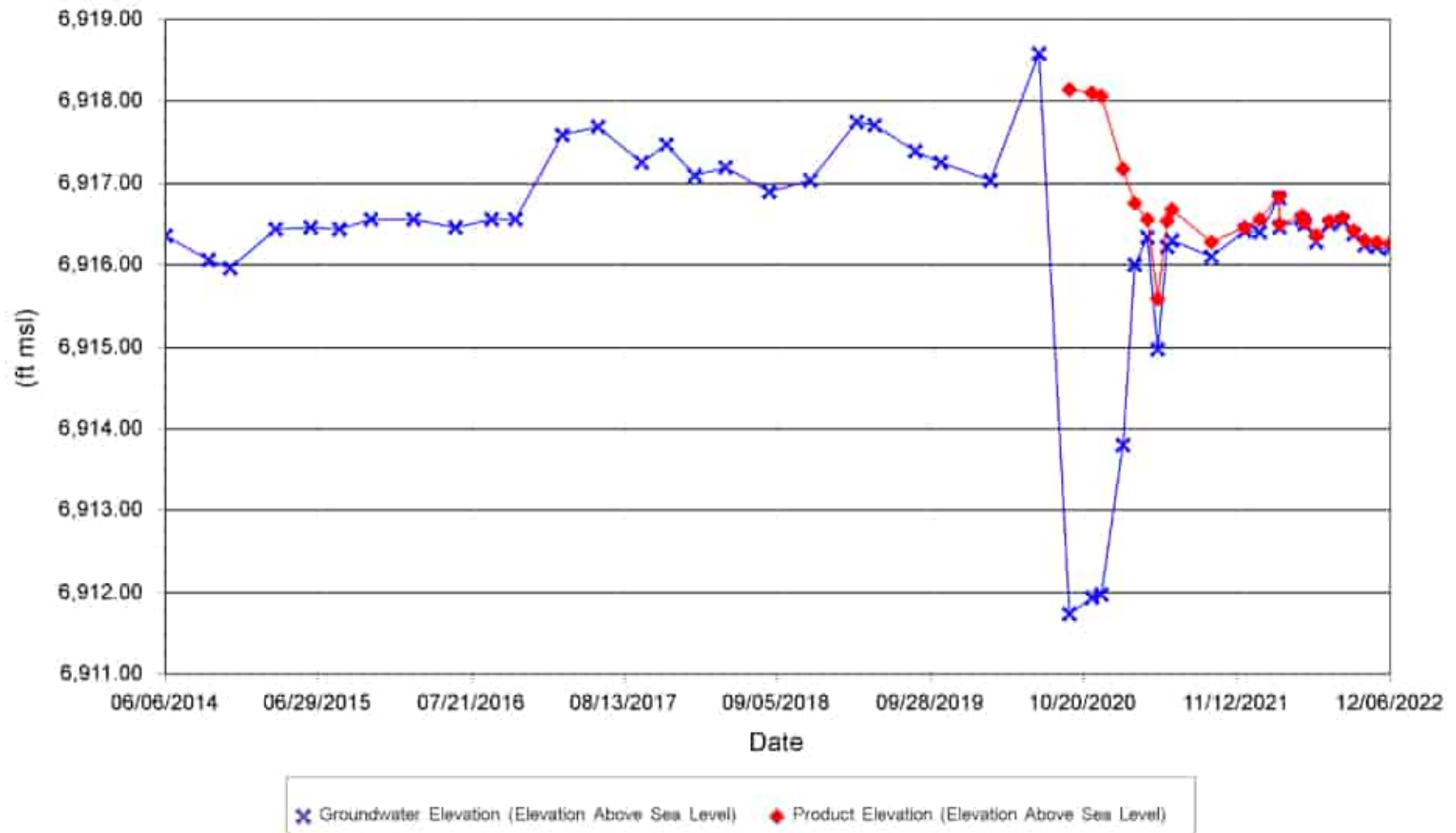
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

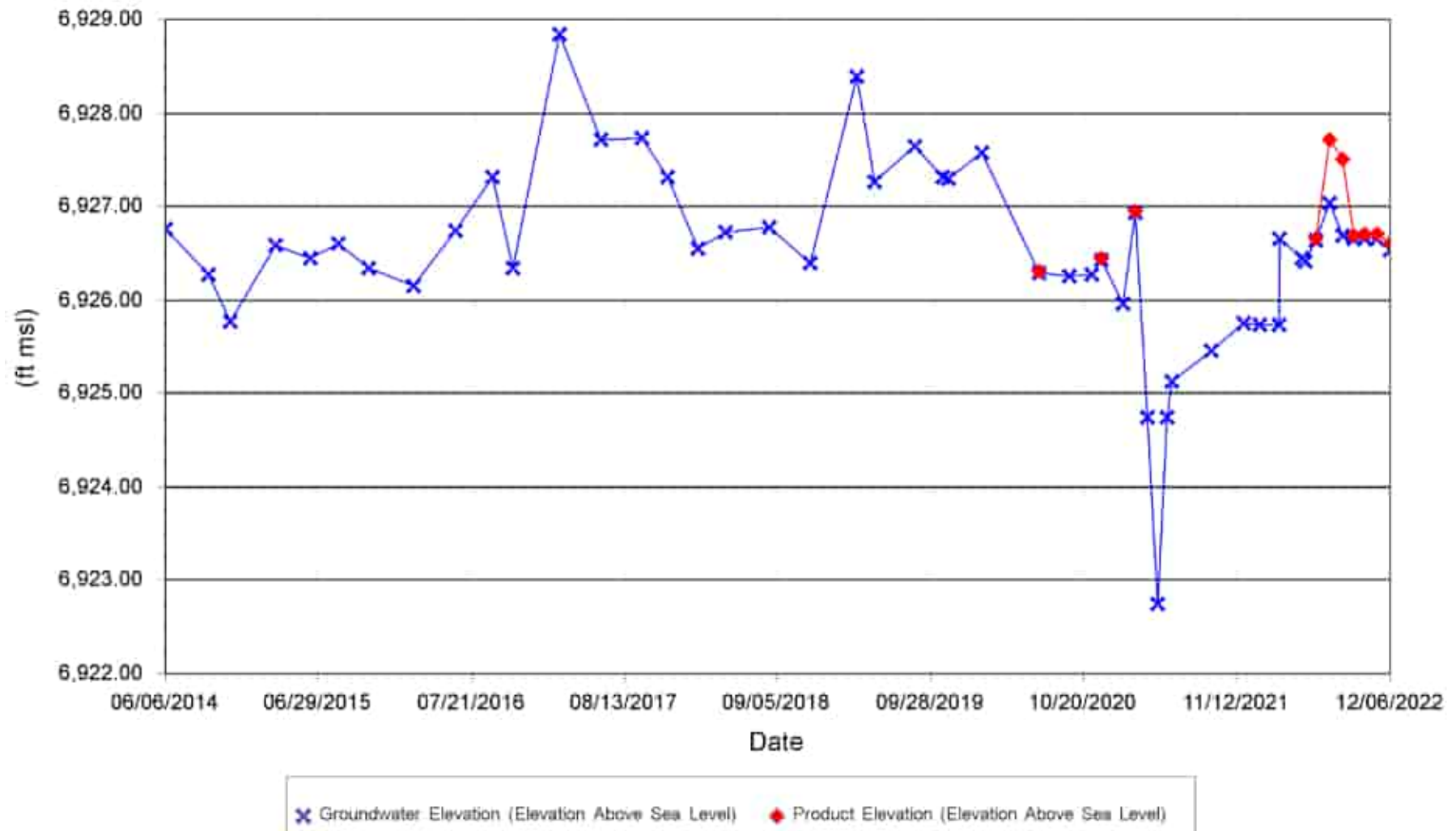
**APPENDIX B-2B. MKTF-31 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

**APPENDIX B-2B. MKTF-32 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

**APPENDIX B-2B. MKTF-33 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

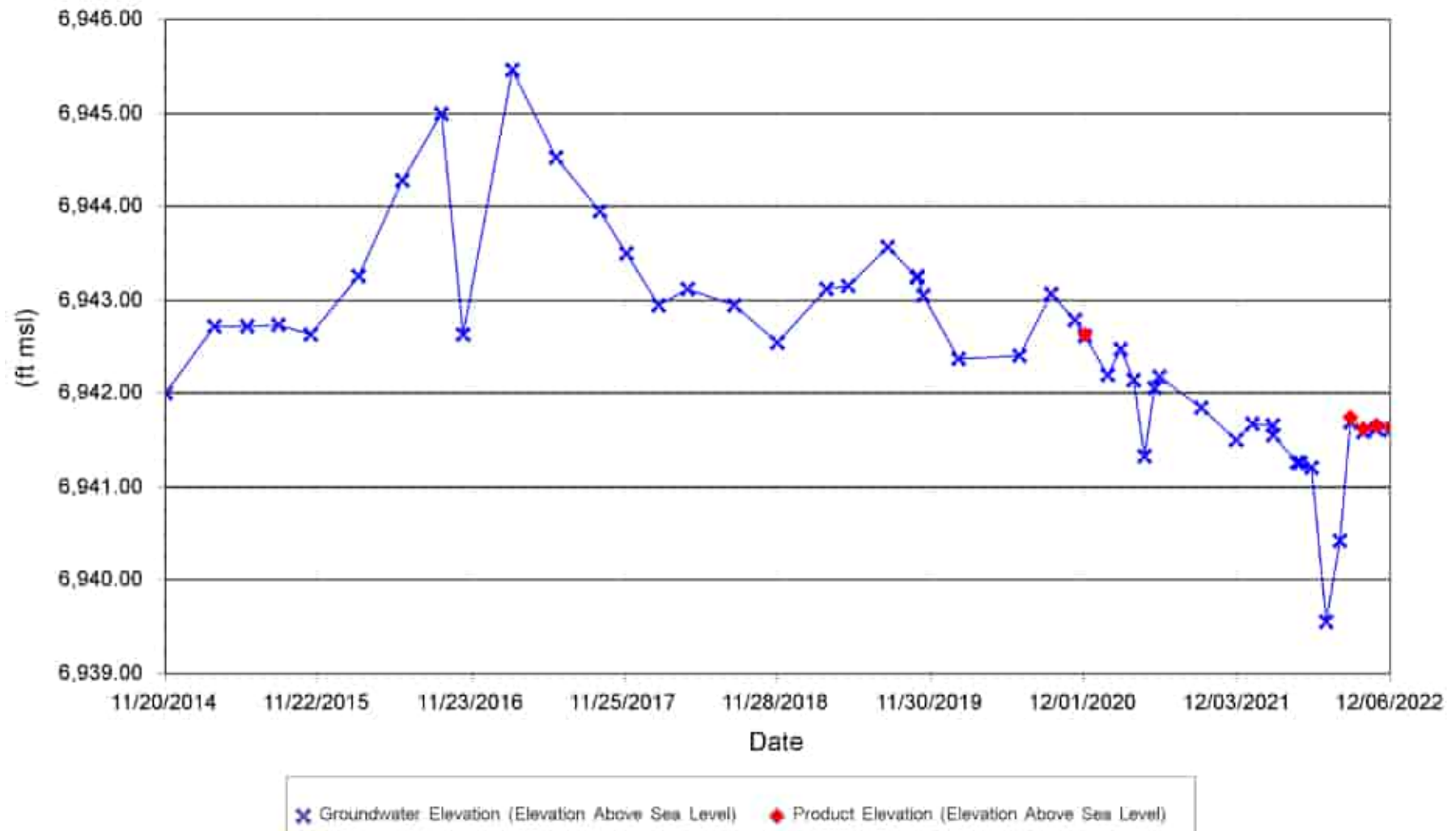
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-34 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-35 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

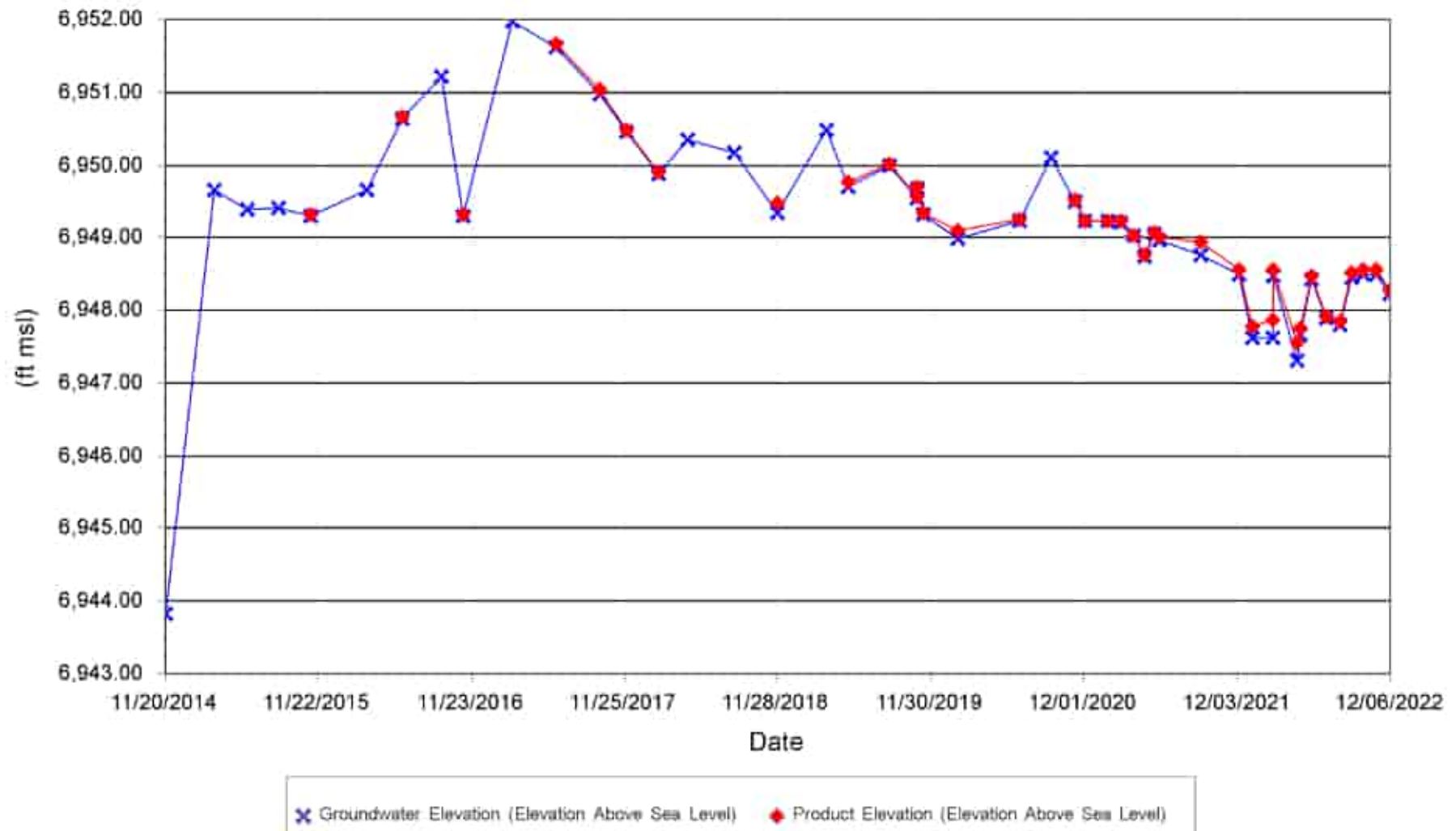


The graph displays two data series over time. The Y-axis, labeled '(ft msl)', ranges from 6,940.80 to 6,942.20 in increments of 0.20. The X-axis, labeled 'Date', spans from 11/20/2014 to 12/06/2022. The 'Groundwater Elevation (Elevation Above Sea Level)' series is represented by blue 'x' markers and a blue line. The 'Product Elevation (Elevation Above Sea Level)' series is represented by red diamond markers and a red line. Both series show a general upward trend from late 2019 to early 2020, followed by a sharp decline in early 2021, and then a recovery through mid-2022.

| Date | Groundwater Elevation (ft msl) | Product Elevation (ft msl) |
|------------|--------------------------------|----------------------------|
| 11/30/2019 | 6,941.68 | 6,942.22 |
| 12/01/2019 | 6,941.88 | 6,942.08 |
| 12/02/2019 | 6,942.25 | 6,942.15 |
| 12/03/2019 | 6,941.95 | 6,942.02 |
| 12/04/2019 | 6,941.92 | 6,941.98 |
| 12/05/2019 | 6,941.75 | 6,941.85 |
| 12/06/2019 | 6,941.20 | 6,941.82 |
| 12/07/2019 | 6,941.82 | 6,941.80 |
| 12/08/2019 | 6,941.55 | 6,941.68 |
| 12/09/2019 | 6,941.52 | 6,941.72 |
| 12/10/2019 | 6,941.50 | 6,941.75 |
| 12/11/2019 | 6,941.55 | 6,941.75 |
| 12/12/2019 | 6,941.52 | 6,941.82 |
| 12/13/2019 | 6,941.00 | 6,941.12 |
| 12/14/2019 | 6,941.02 | 6,941.10 |
| 12/15/2019 | 6,941.58 | 6,941.78 |
| 12/16/2019 | 6,941.78 | 6,941.65 |
| 12/17/2019 | 6,941.75 | 6,941.80 |
| 12/18/2019 | 6,941.78 | 6,941.82 |
| 12/19/2019 | 6,941.75 | 6,941.78 |
| 12/20/2019 | 6,941.65 | 6,941.75 |

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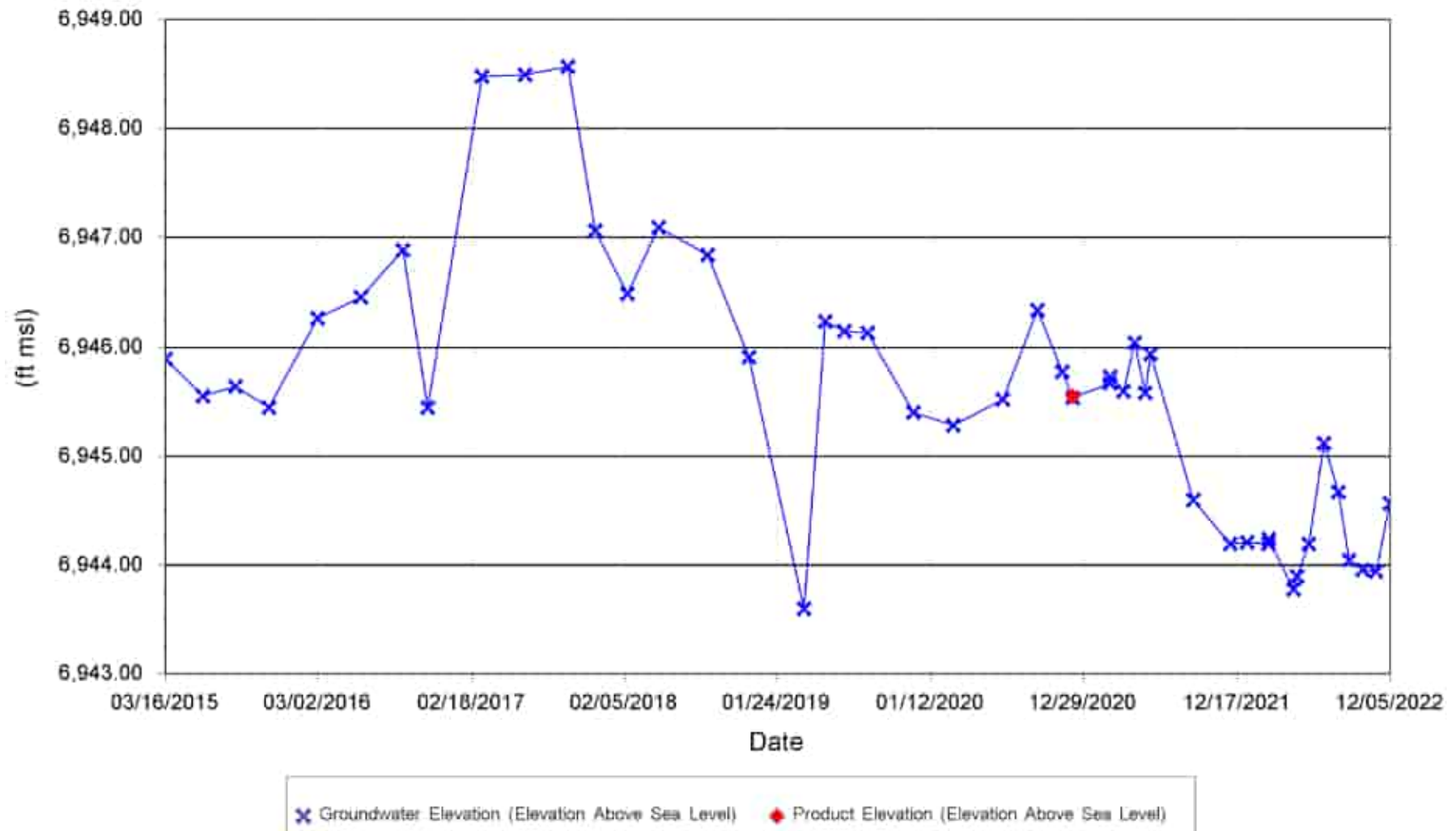
**APPENDIX B-2B. MKTF-37 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

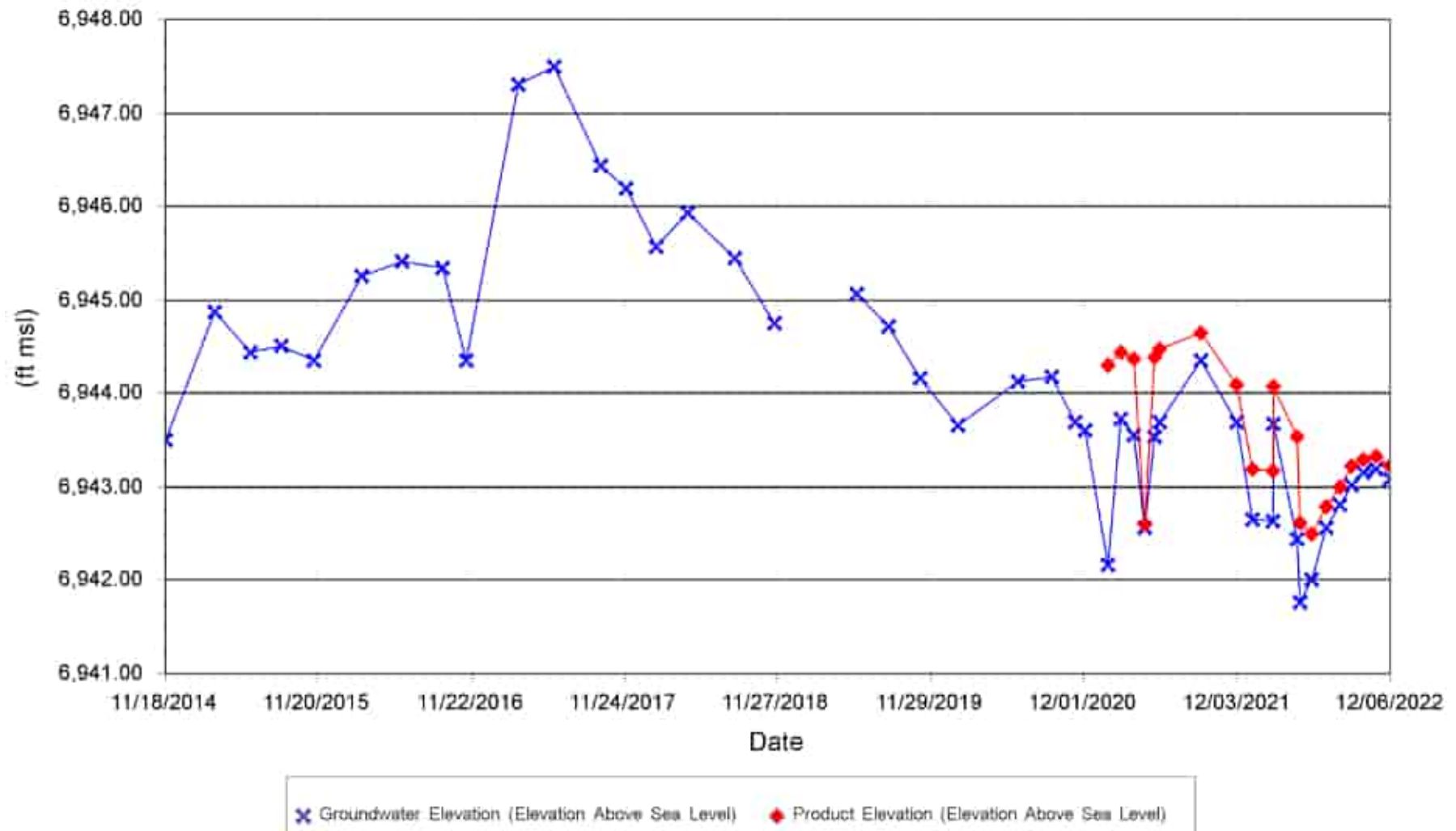
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-38 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



**APPENDIX B-2B. MKTF-39 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

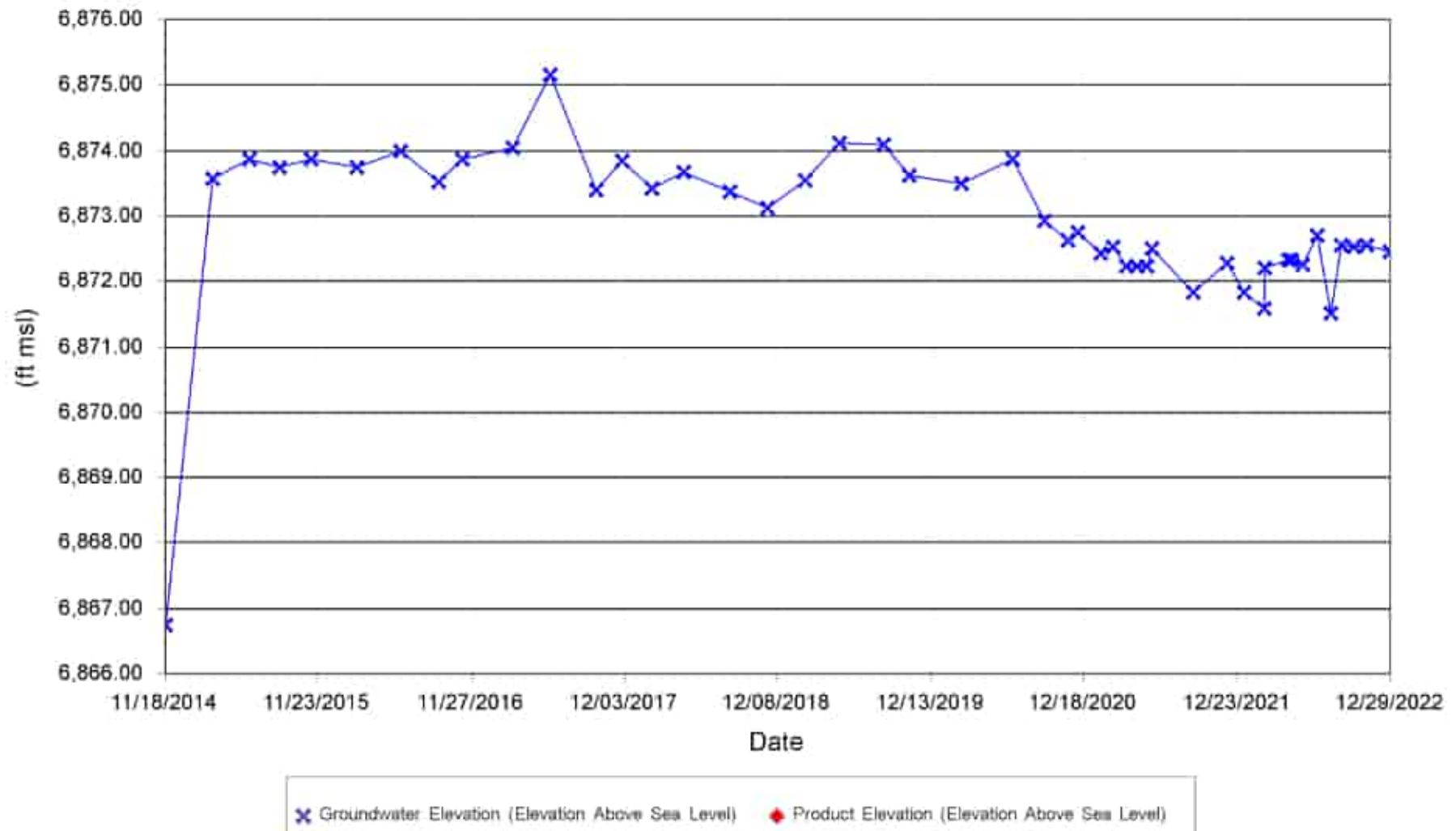
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

The graph displays two data series over time. The Y-axis represents elevation in feet above mean sea level (ft msl), ranging from 6,874.00 to 6,883.00. The X-axis represents the date, from 11/18/2014 to 12/08/2022. The 'Groundwater Elevation' series (blue line with 'x' markers) shows a steady increase from approximately 6,874.3 ft msl in late 2014 to a peak of about 6,882.2 ft msl in late 2019, followed by a decline to around 6,880.1 ft msl by late 2021, and a slight recovery to 6,880.2 ft msl by late 2022. The 'Product Elevation' series (red line with diamond markers) remains relatively flat, starting at approximately 6,878.5 ft msl in late 2014 and ending at approximately 6,878.5 ft msl in late 2022.

| Date | Groundwater Elevation (ft msl) | Product Elevation (ft msl) |
|------------|--------------------------------|----------------------------|
| 11/18/2014 | 6,874.3 | 6,878.5 |
| 11/20/2015 | 6,880.5 | 6,878.5 |
| 11/22/2016 | 6,881.0 | 6,878.5 |
| 11/25/2017 | 6,881.1 | 6,878.5 |
| 11/28/2018 | 6,881.6 | 6,878.5 |
| 11/30/2019 | 6,882.2 | 6,878.5 |
| 12/02/2020 | 6,880.5 | 6,878.5 |
| 12/05/2021 | 6,880.0 | 6,878.5 |
| 12/08/2022 | 6,880.2 | 6,878.5 |

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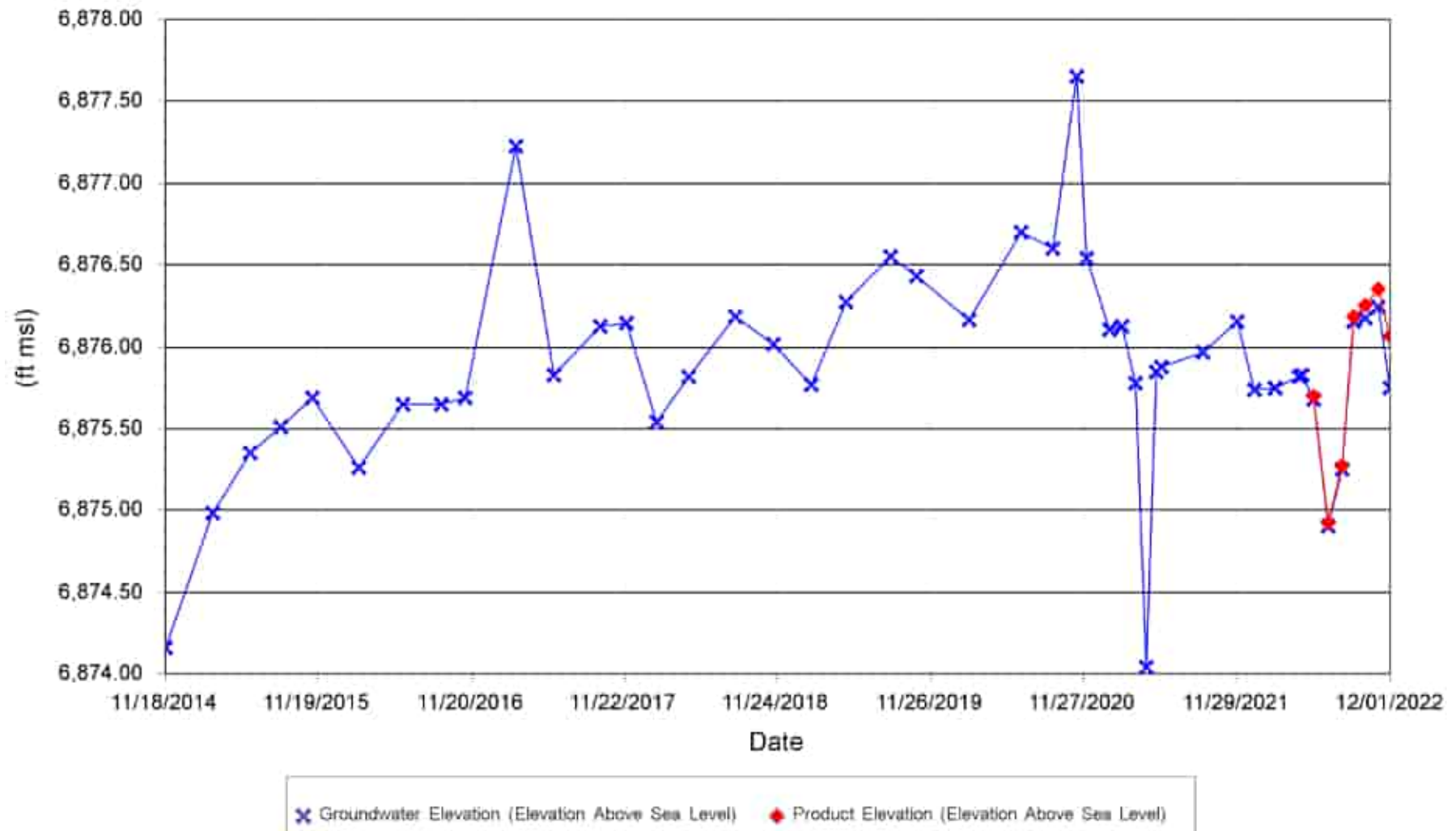
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**APPENDIX B-2B. MKTF-41 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

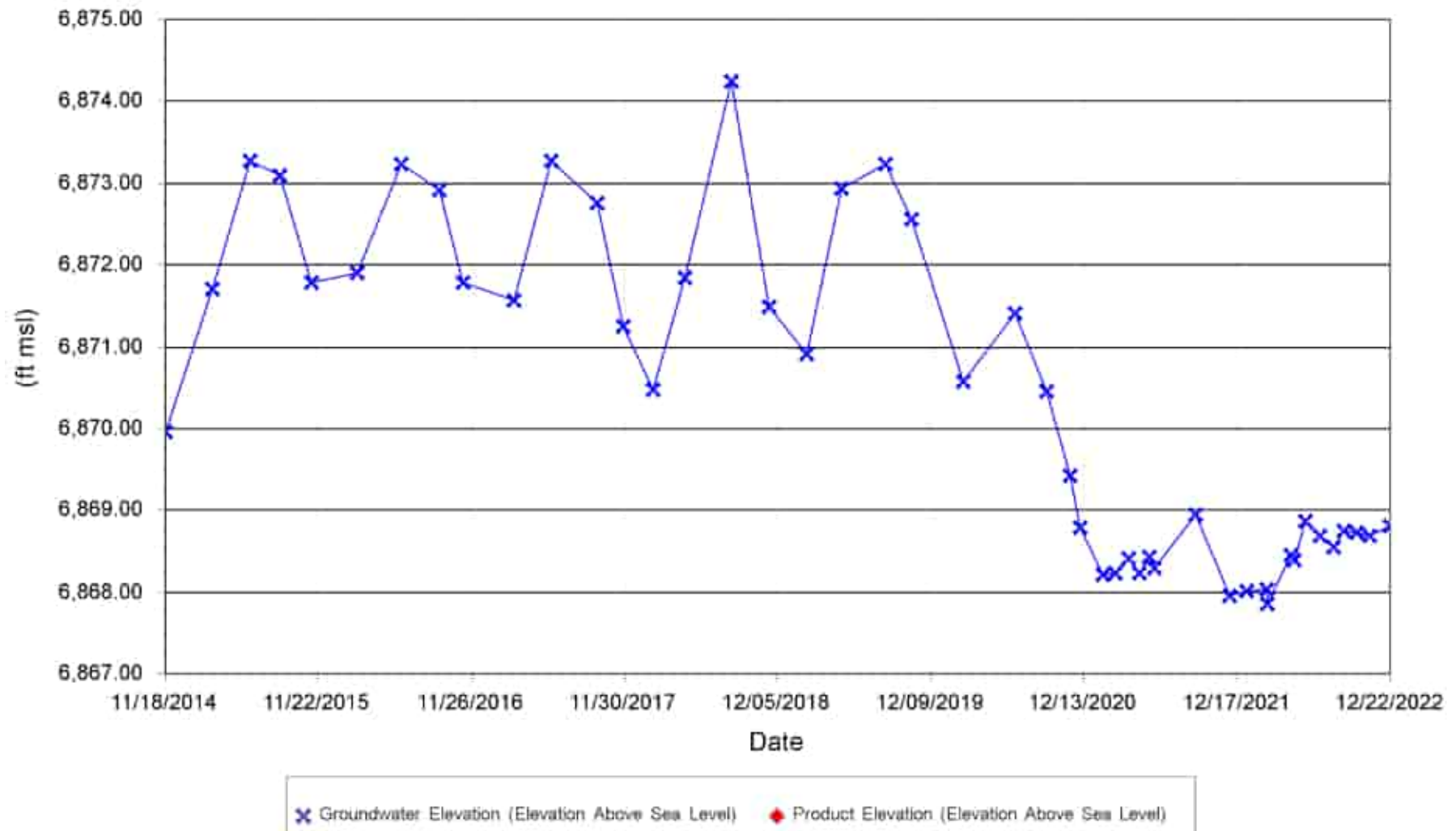
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

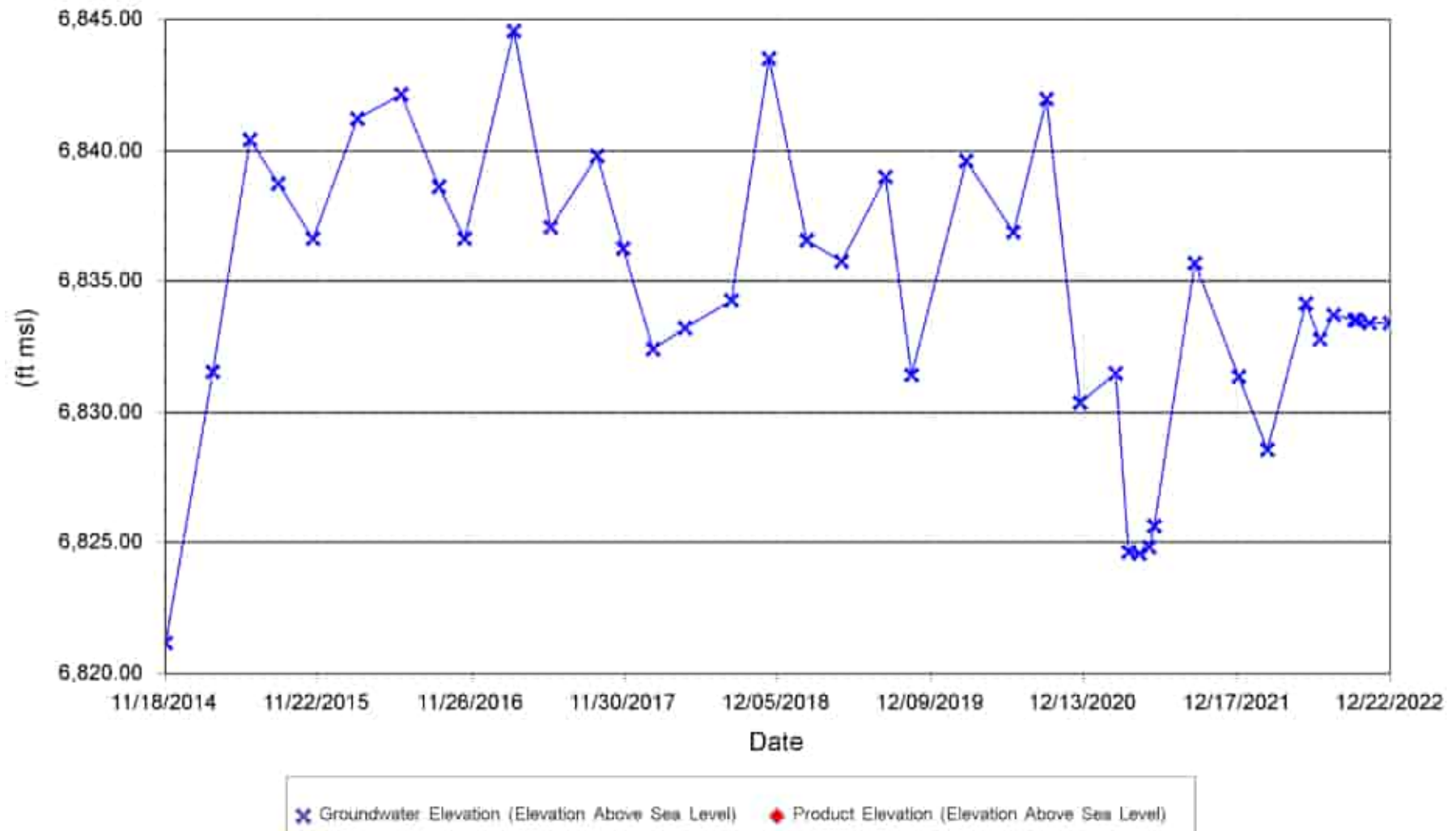
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-42 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-43 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

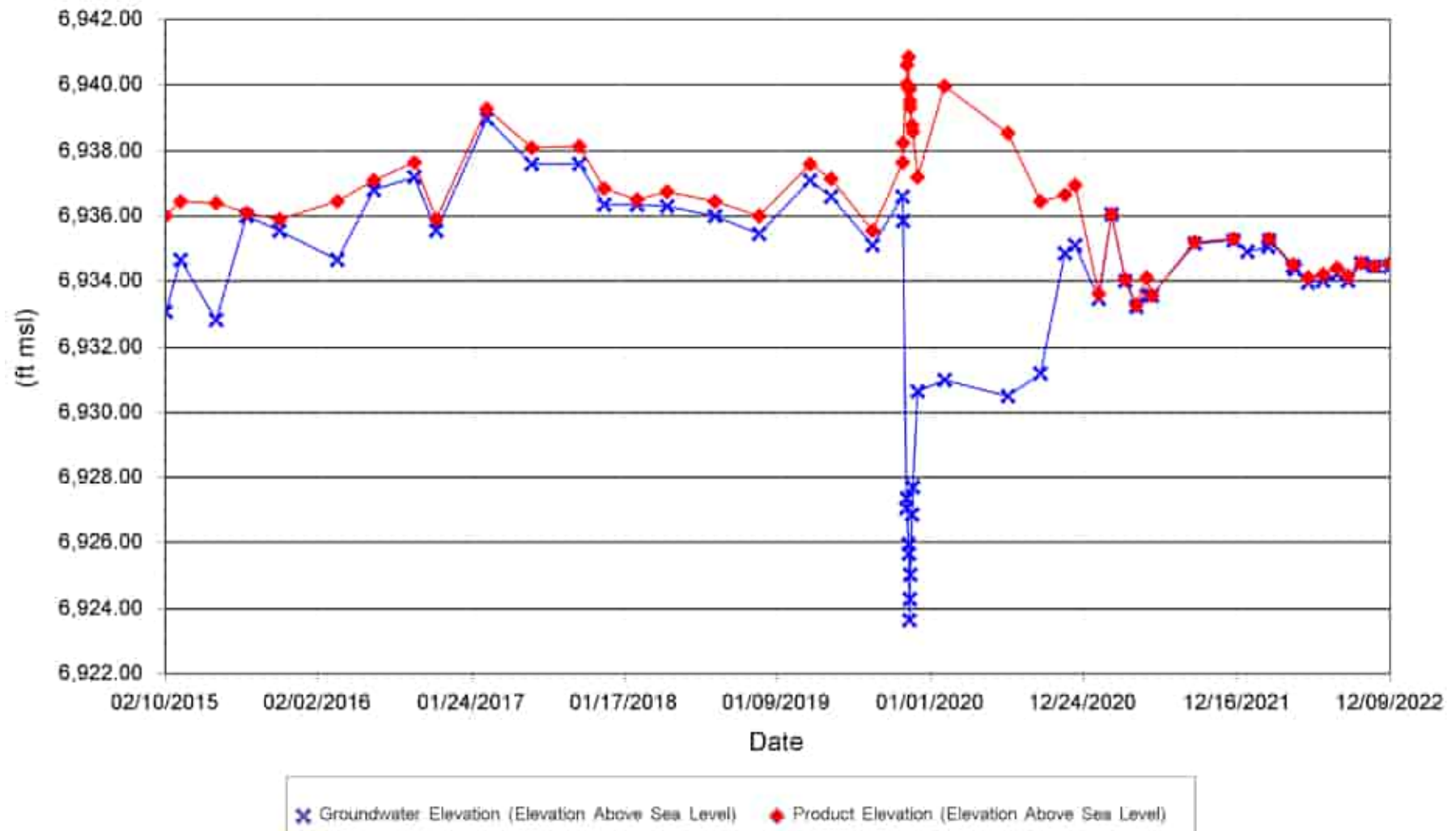
**APPENDIX B-2B. MKTF-44 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. MKTF-45 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

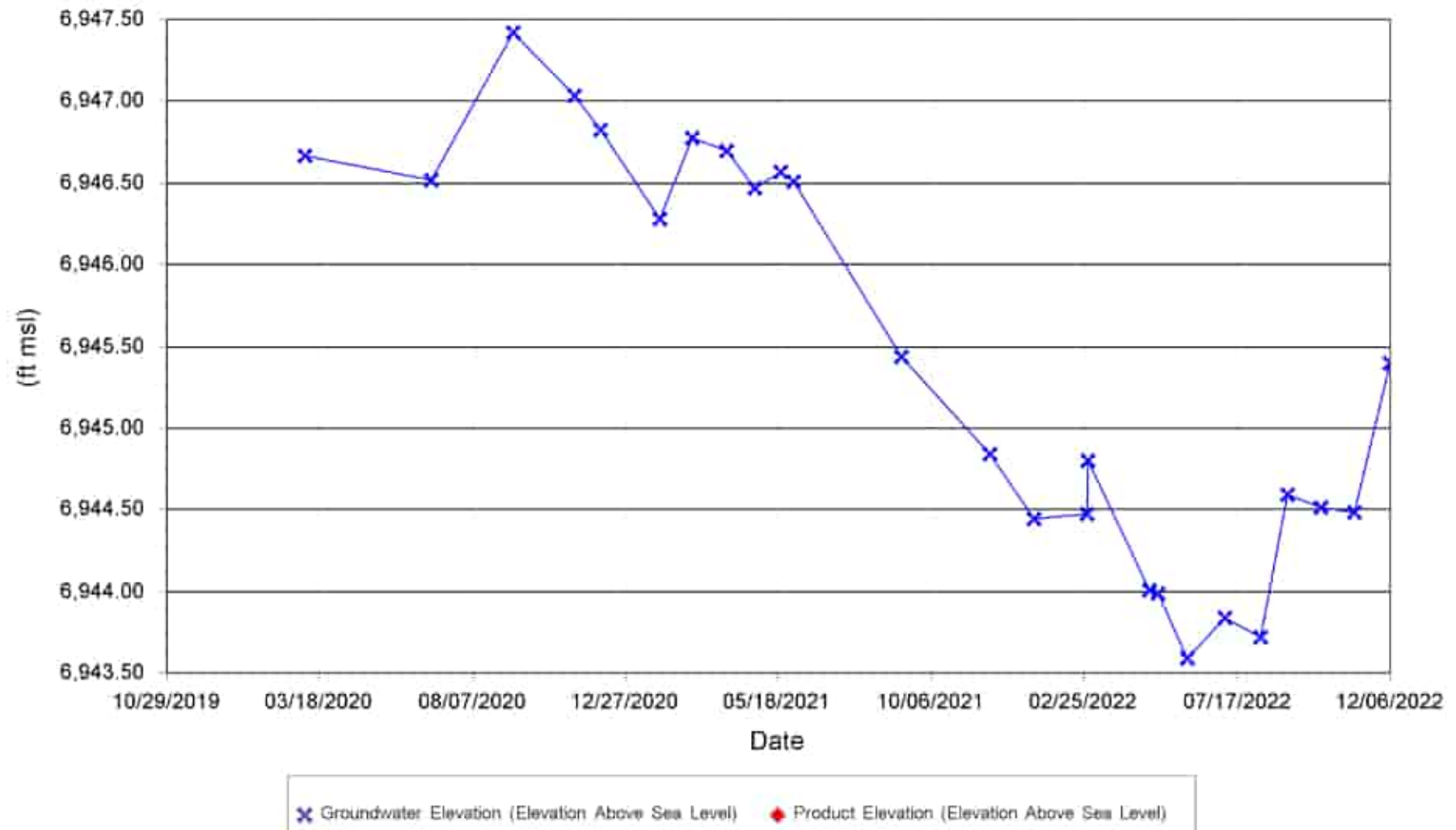


Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

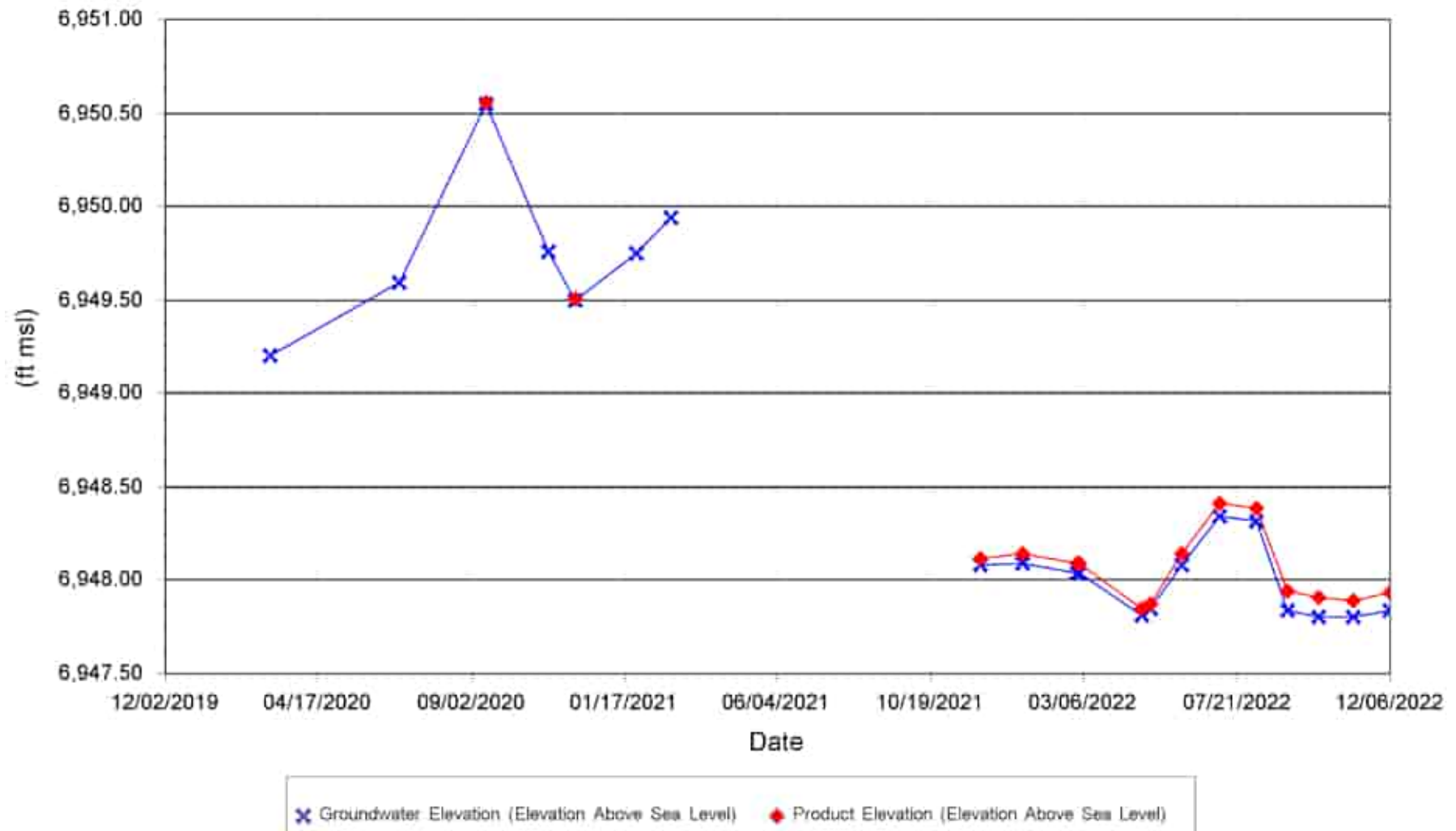
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-46 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

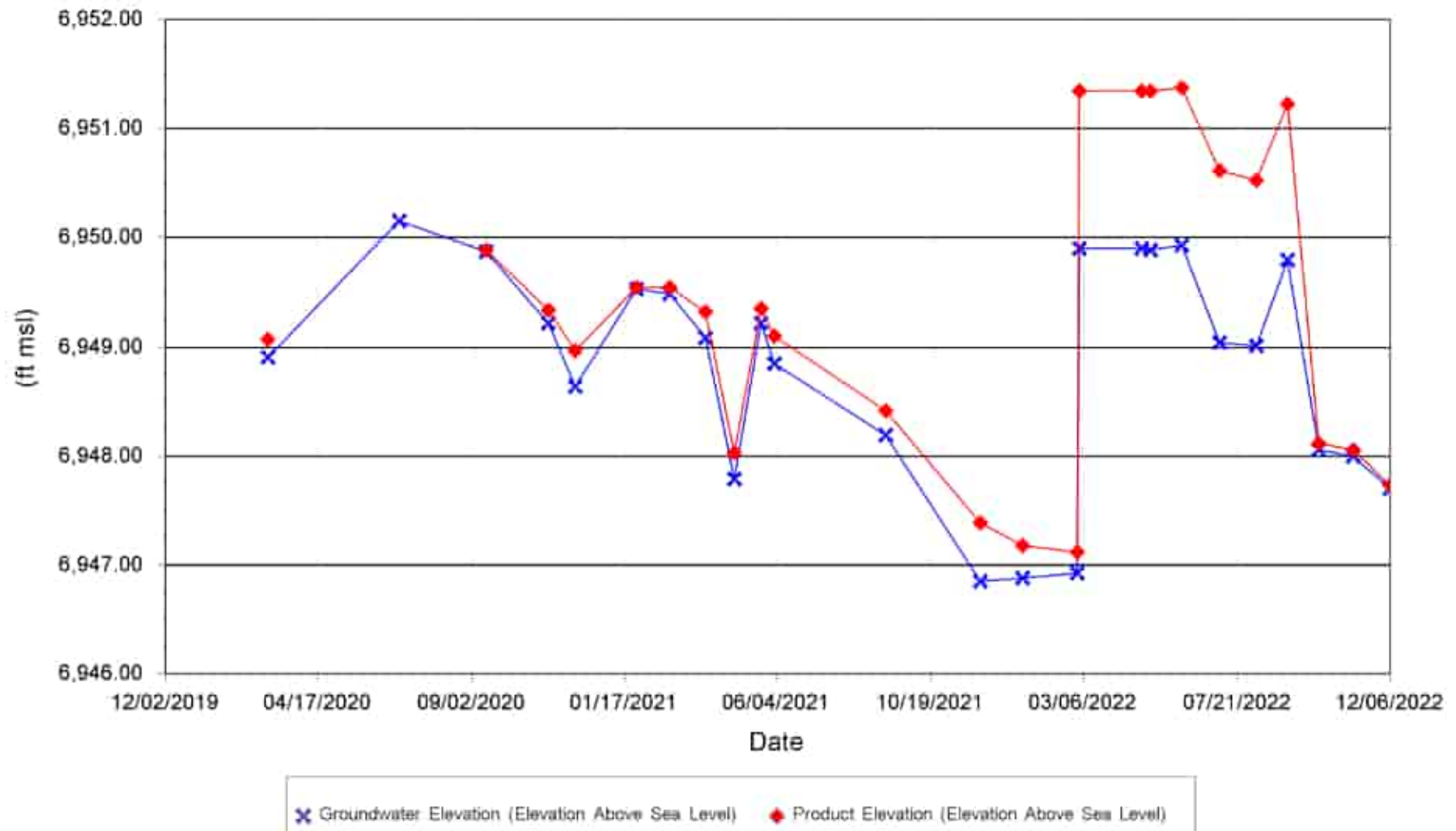
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-47 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

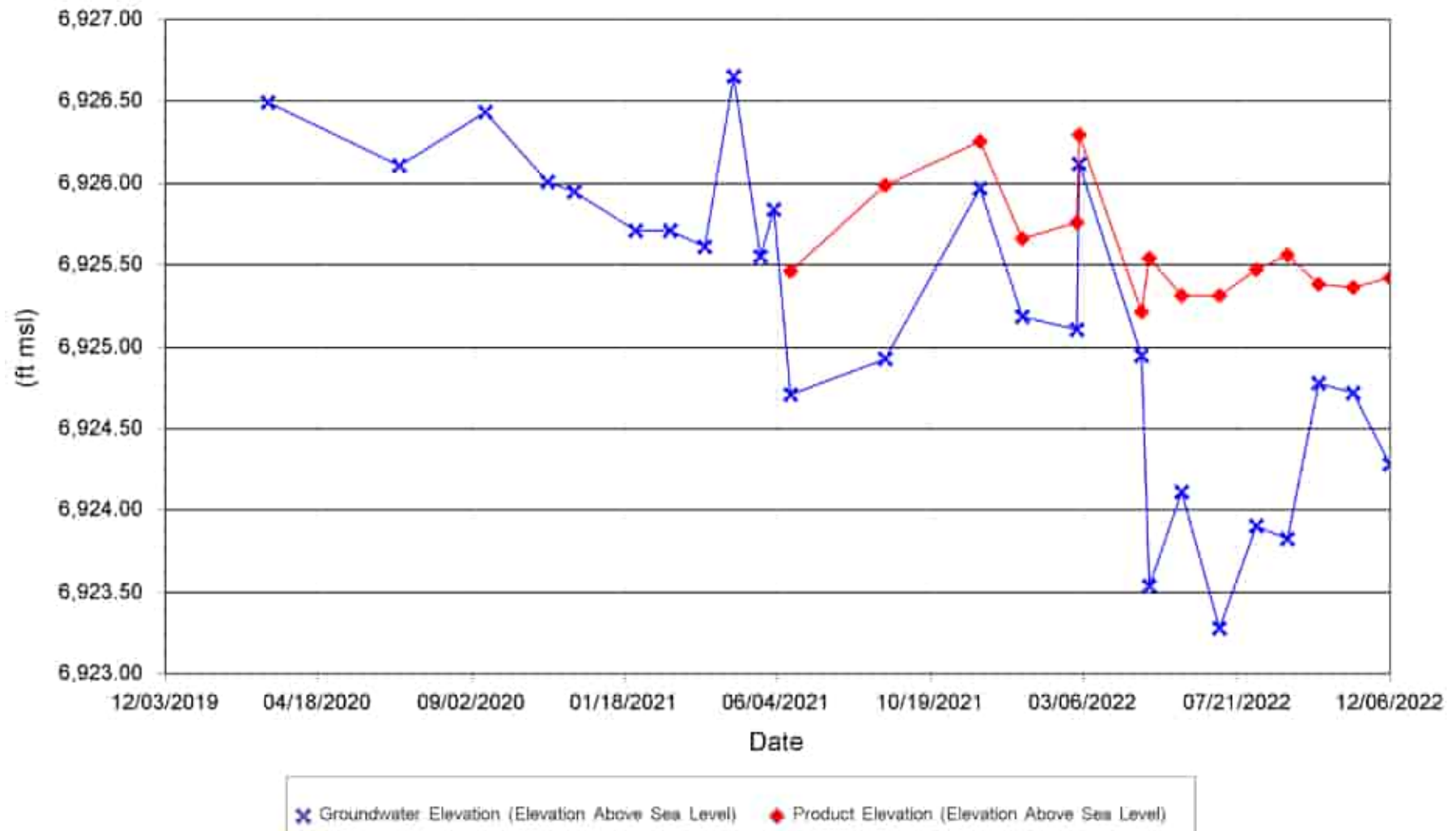
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

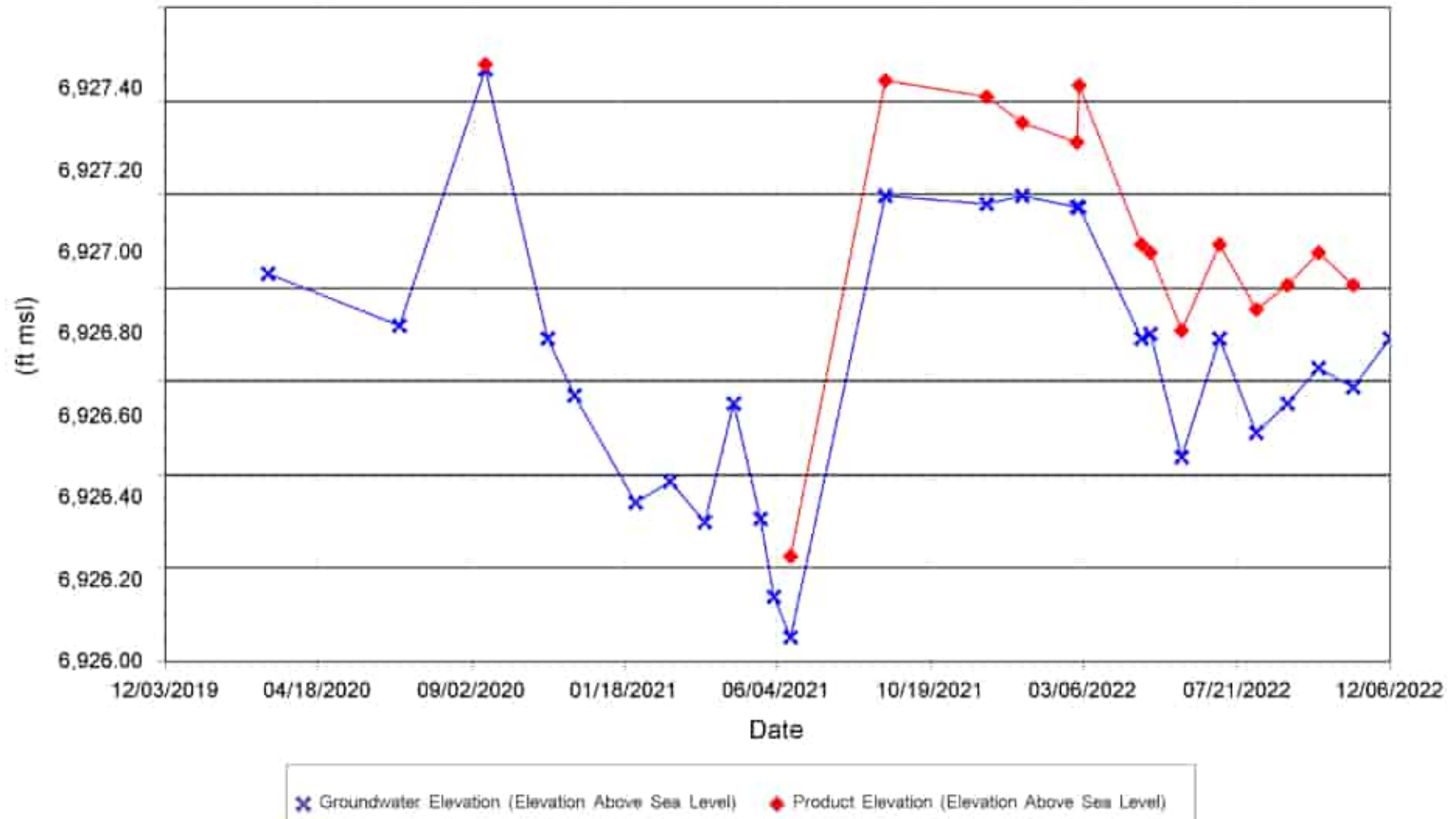
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-48 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

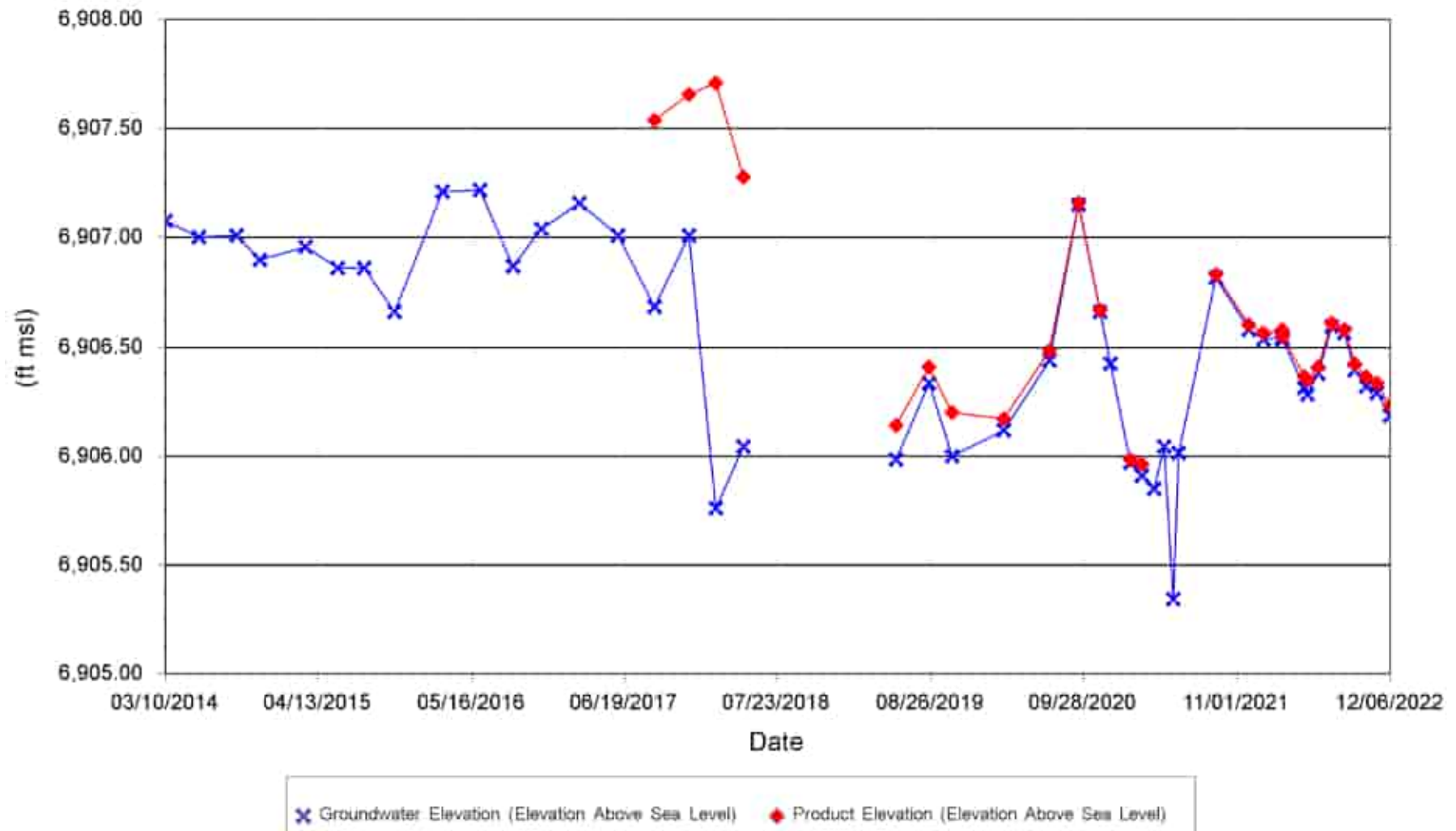
**APPENDIX B-2B. MKTF-49 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. MKTF-50 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. NAPIS-1 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

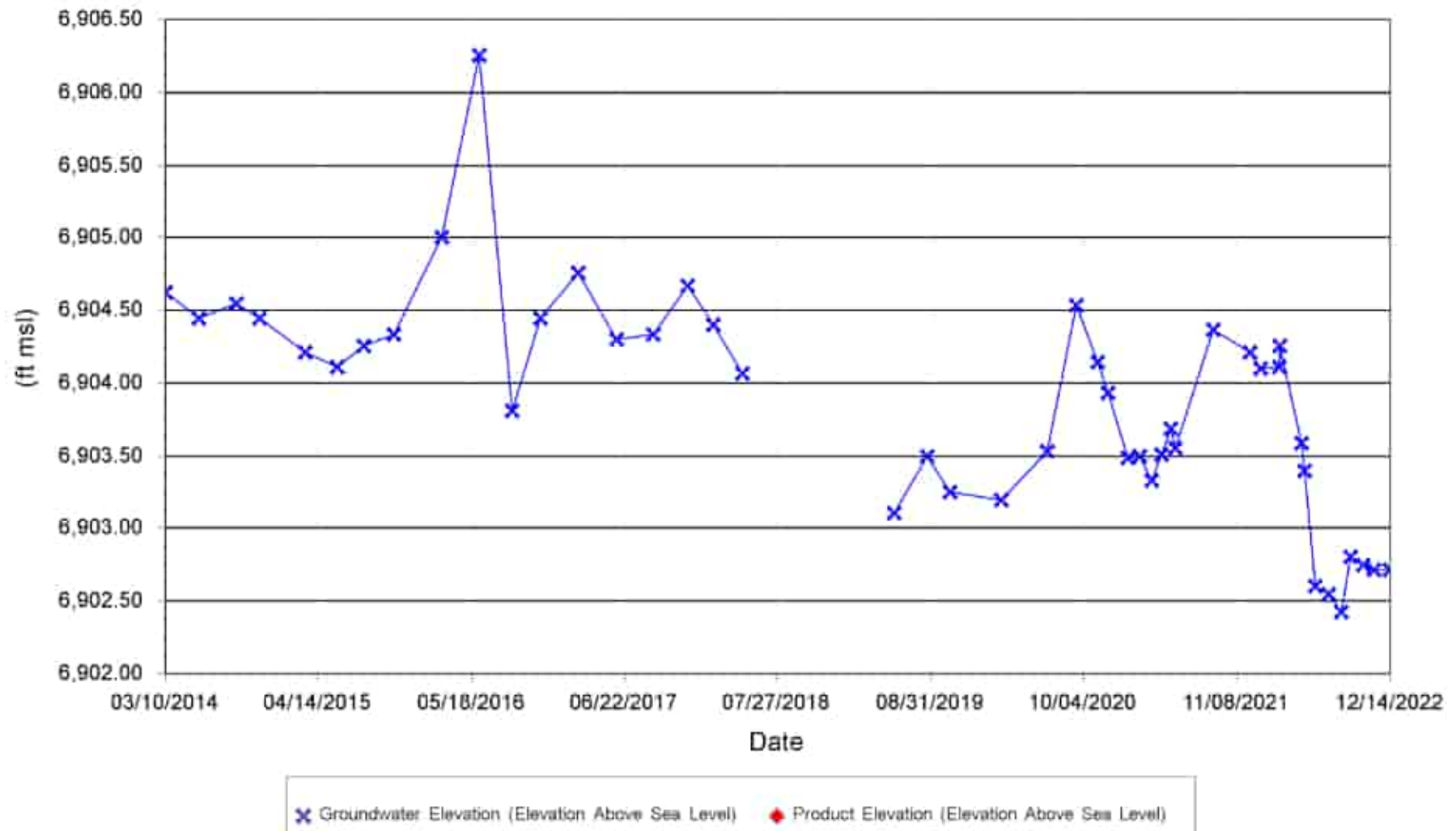


Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

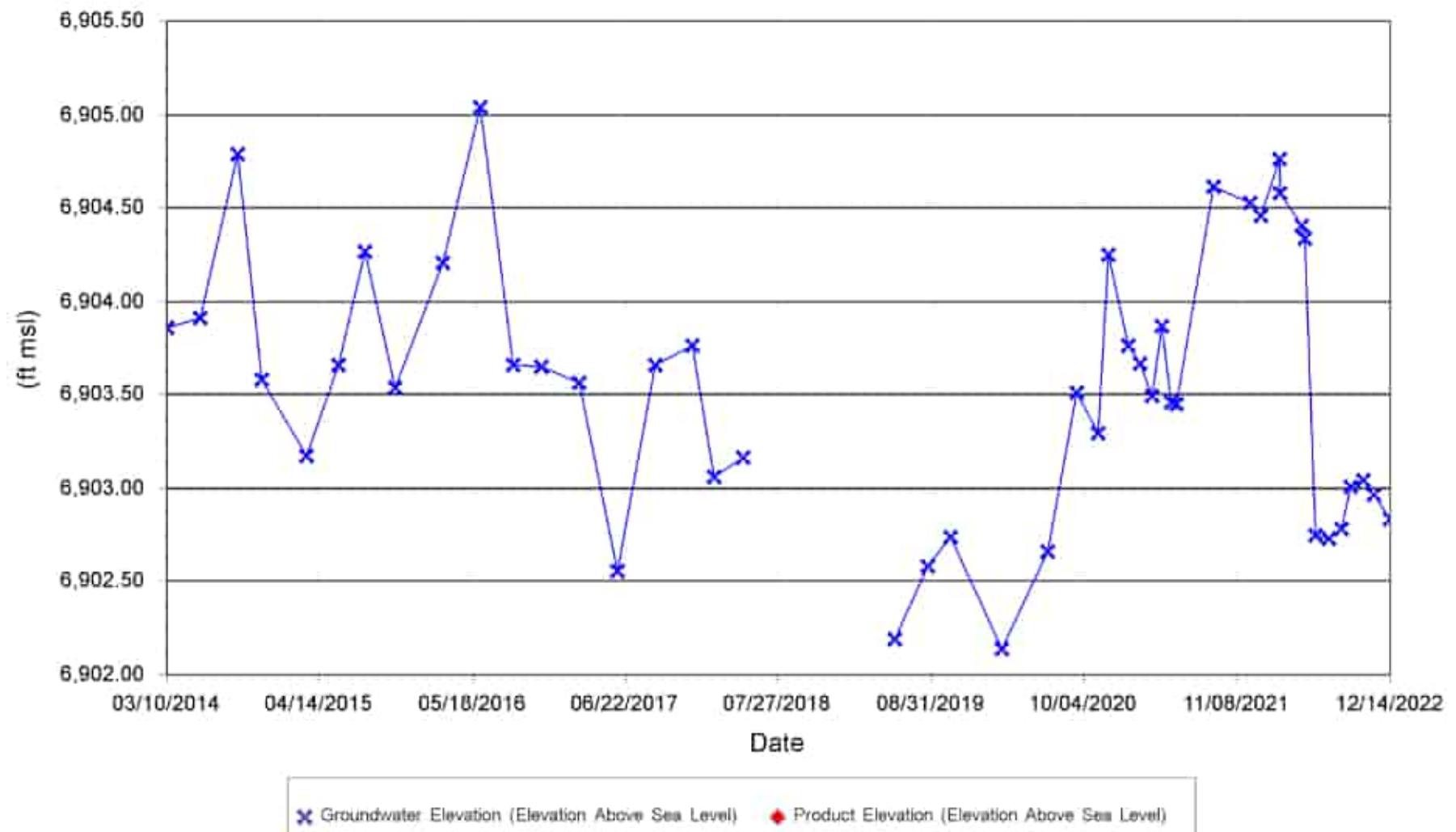
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. NAPIS-2 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

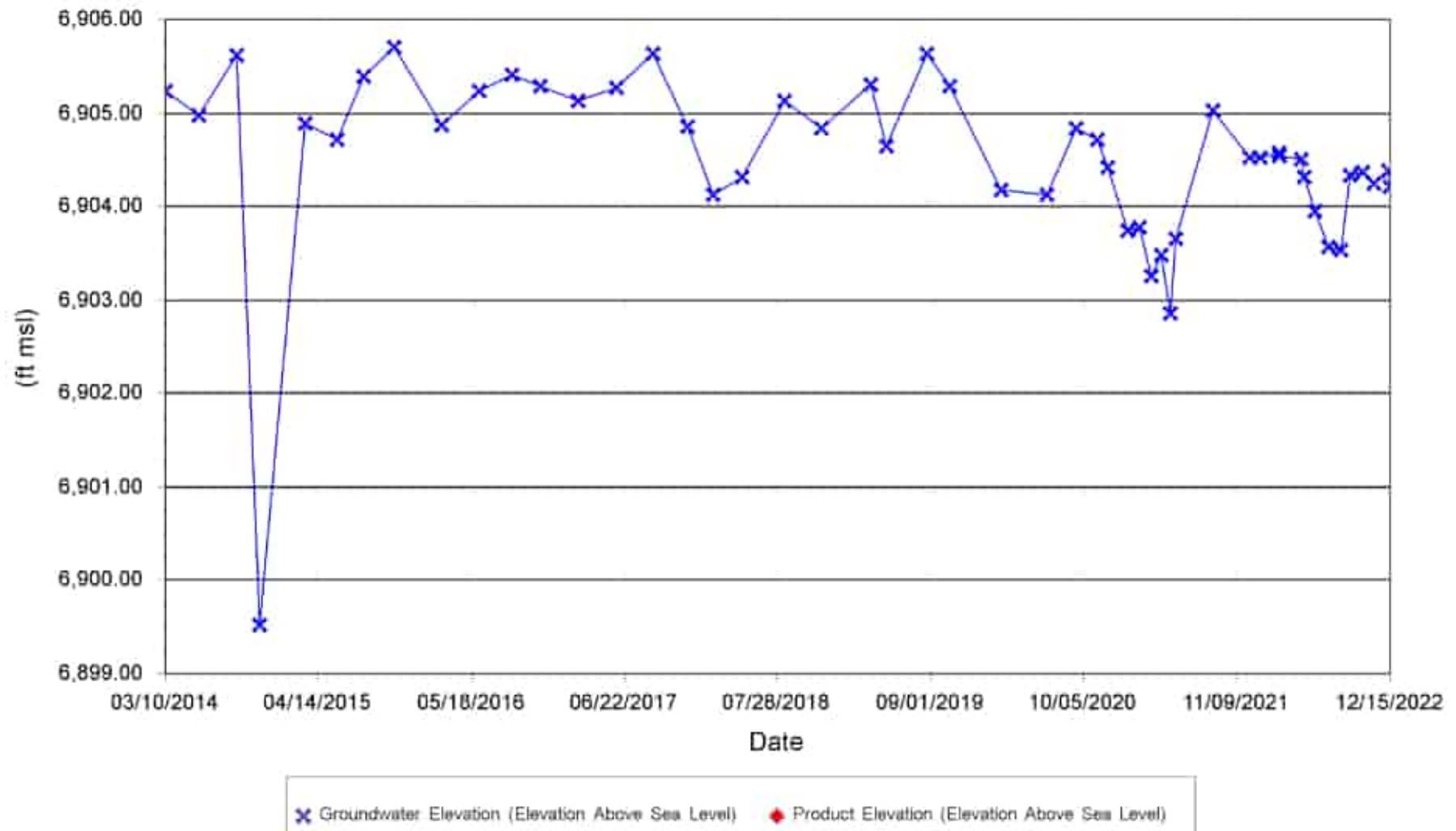
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

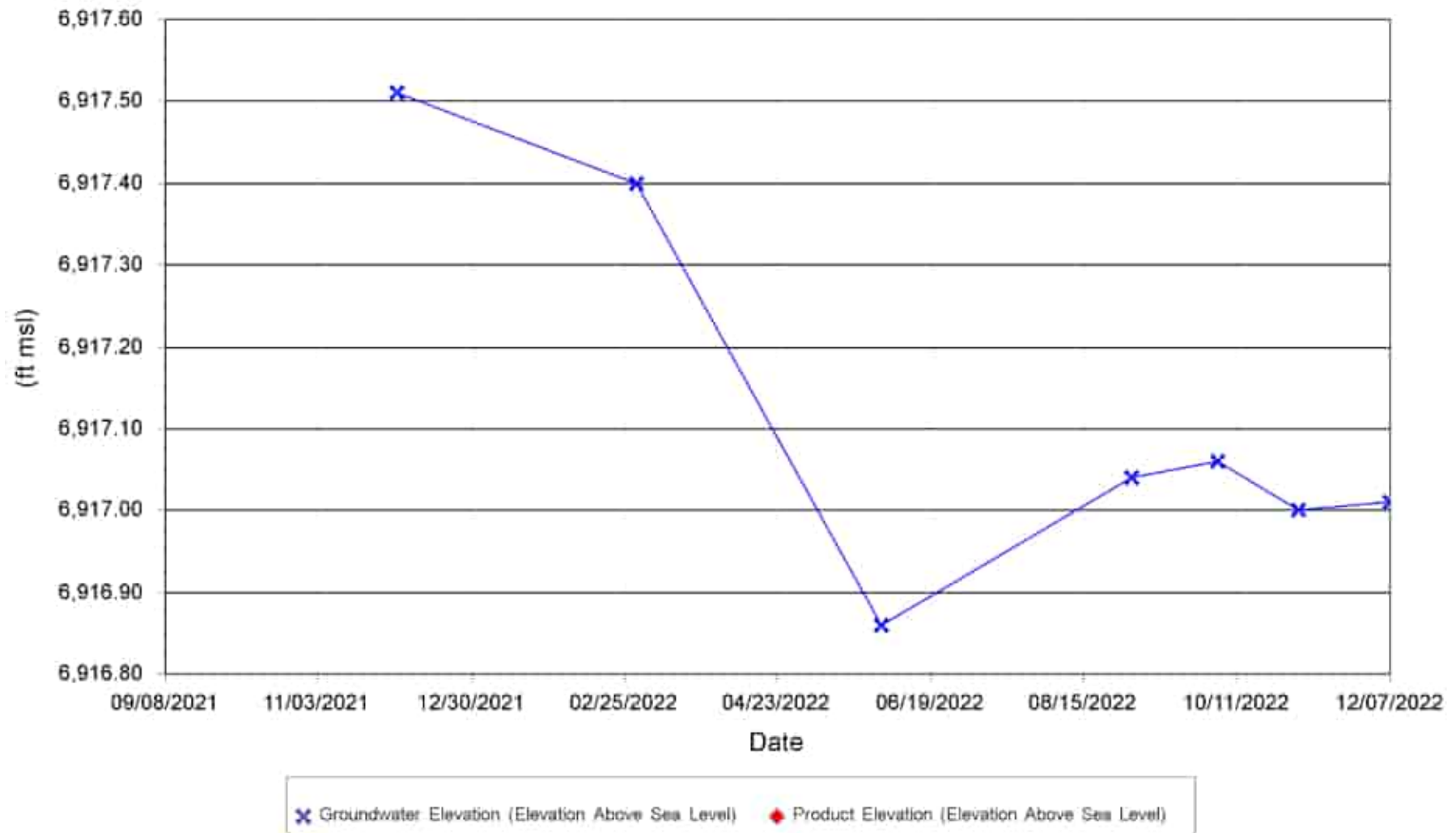
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. NAPIS-3 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OAPIS-1 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

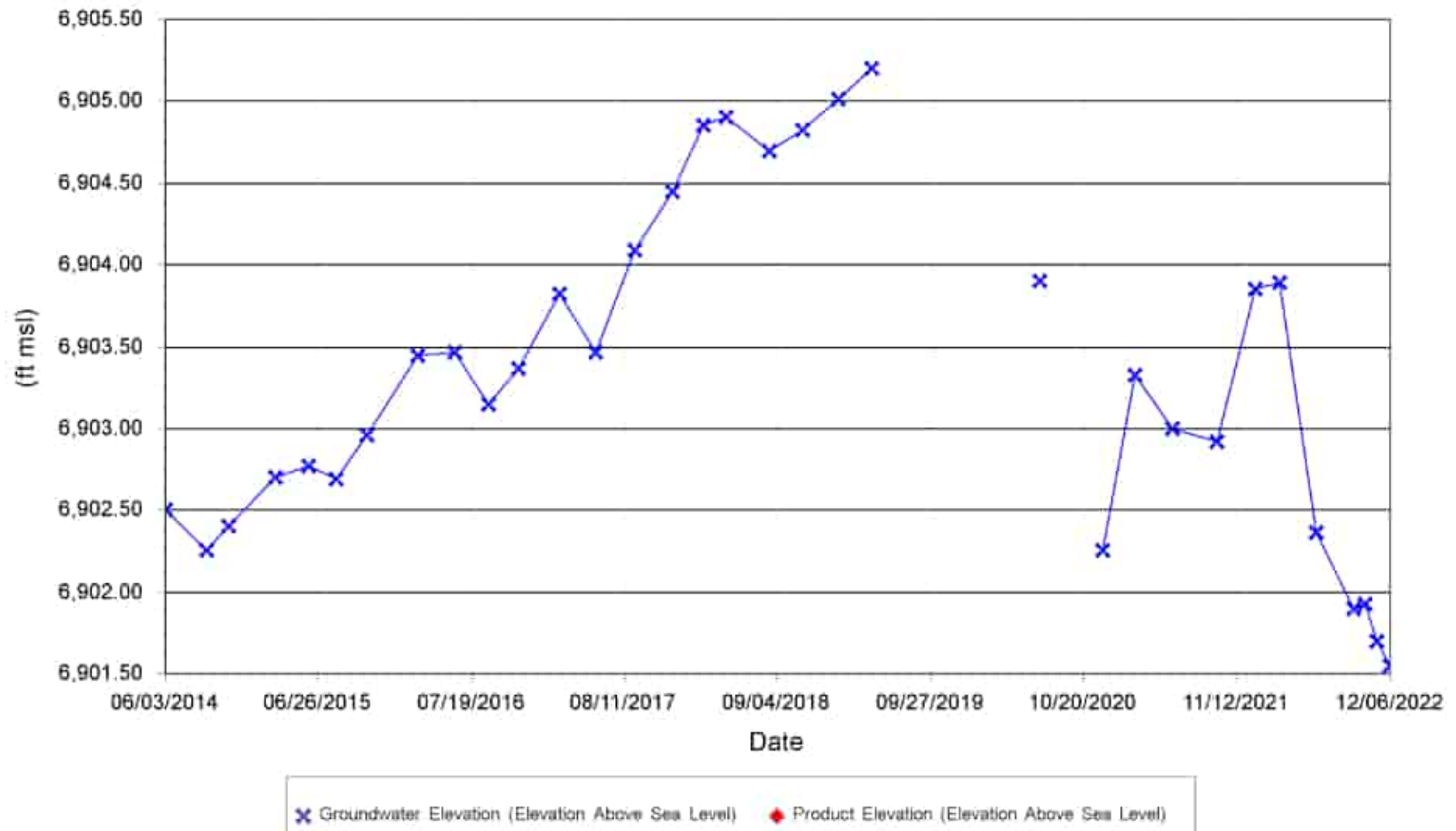
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-12A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

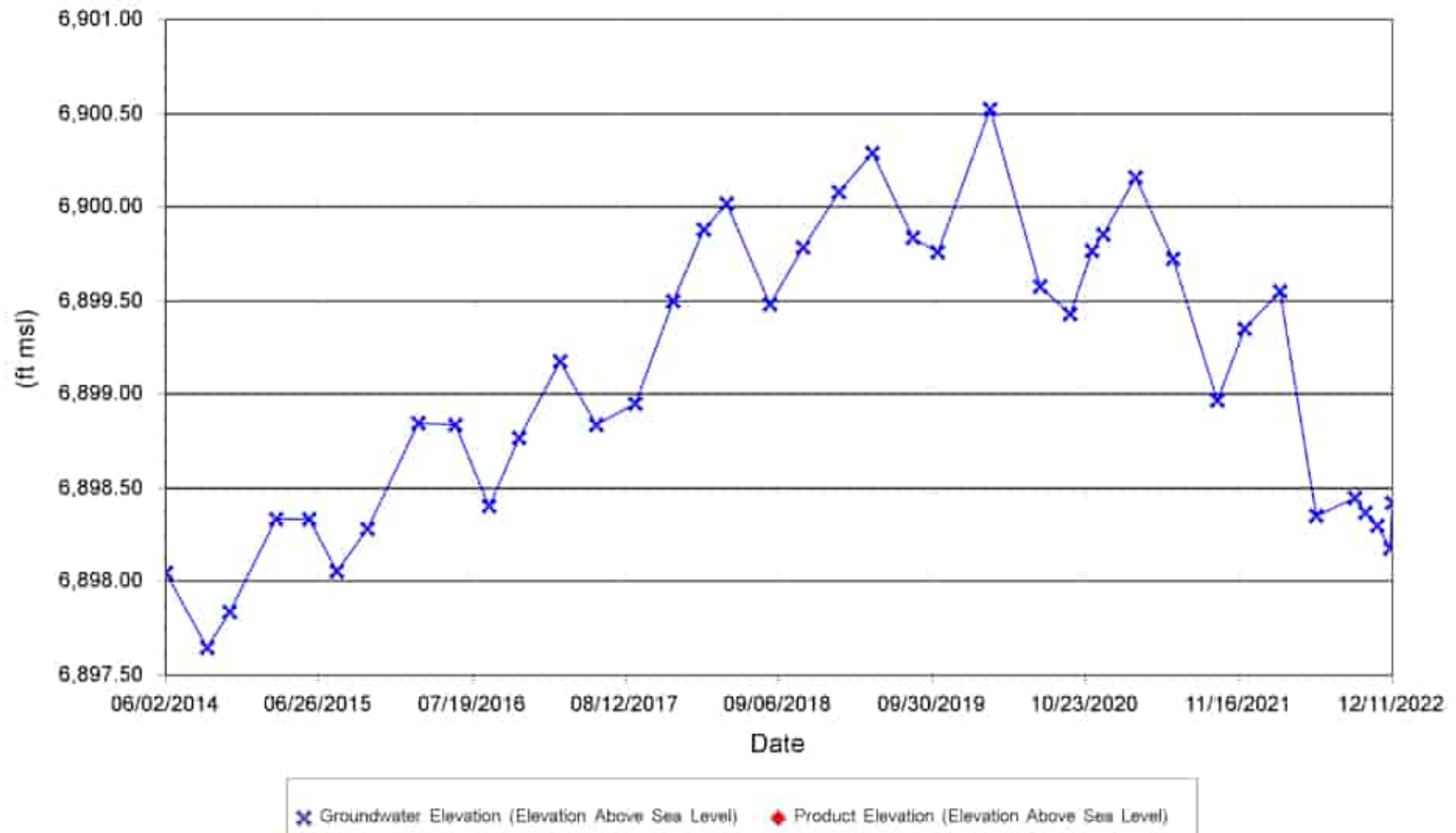
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-14 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

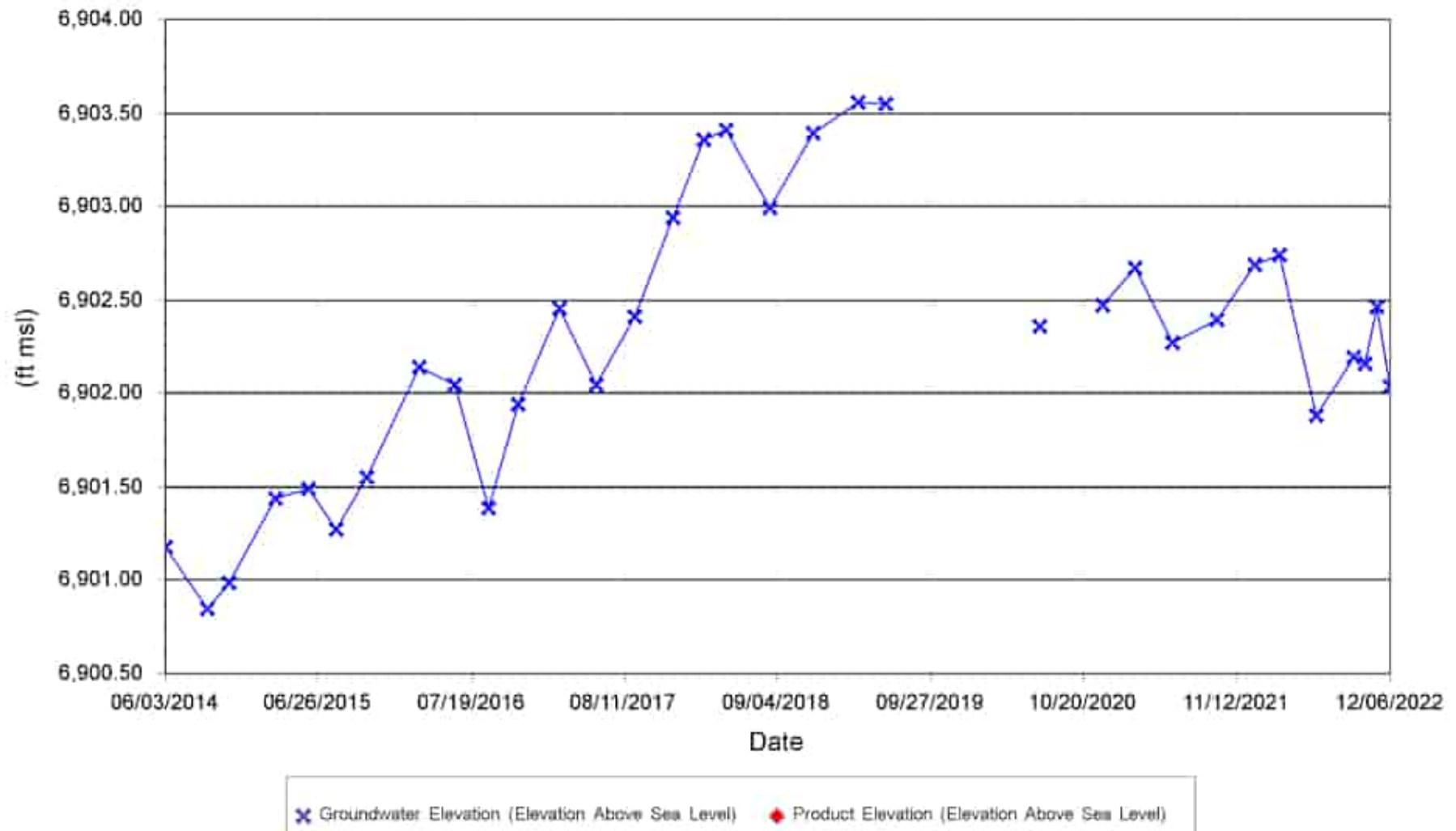
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-29 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

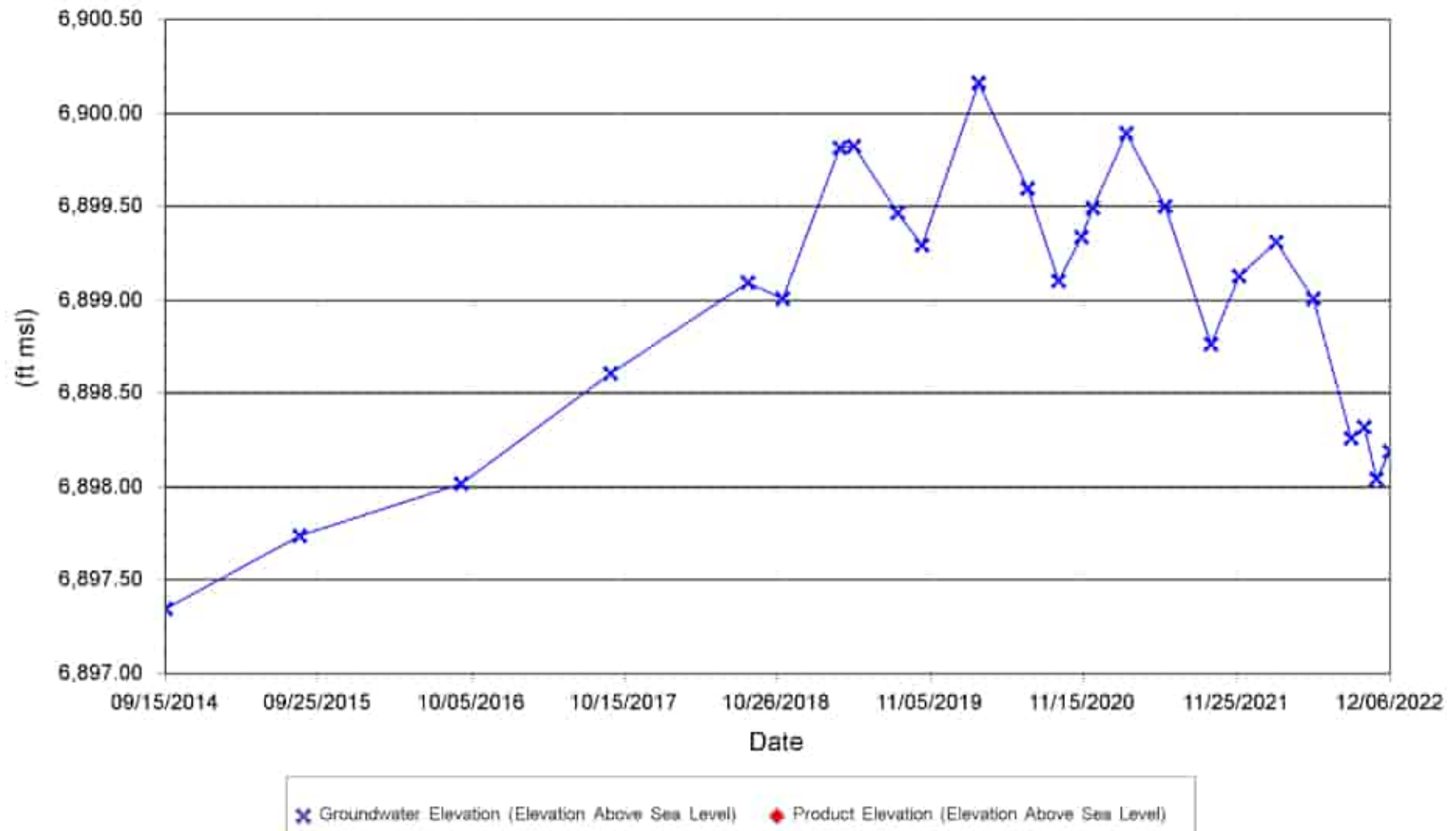
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-30 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

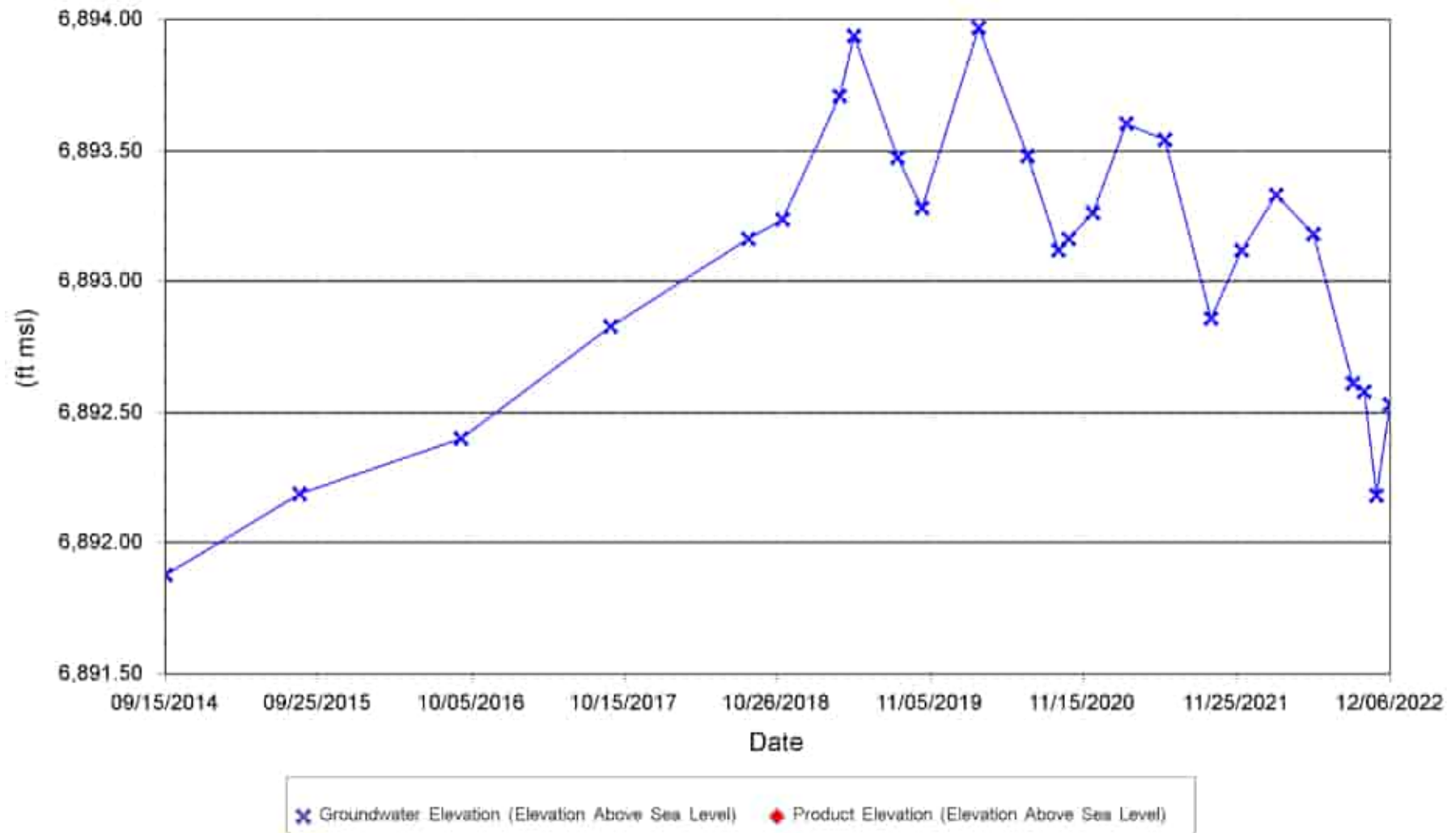
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

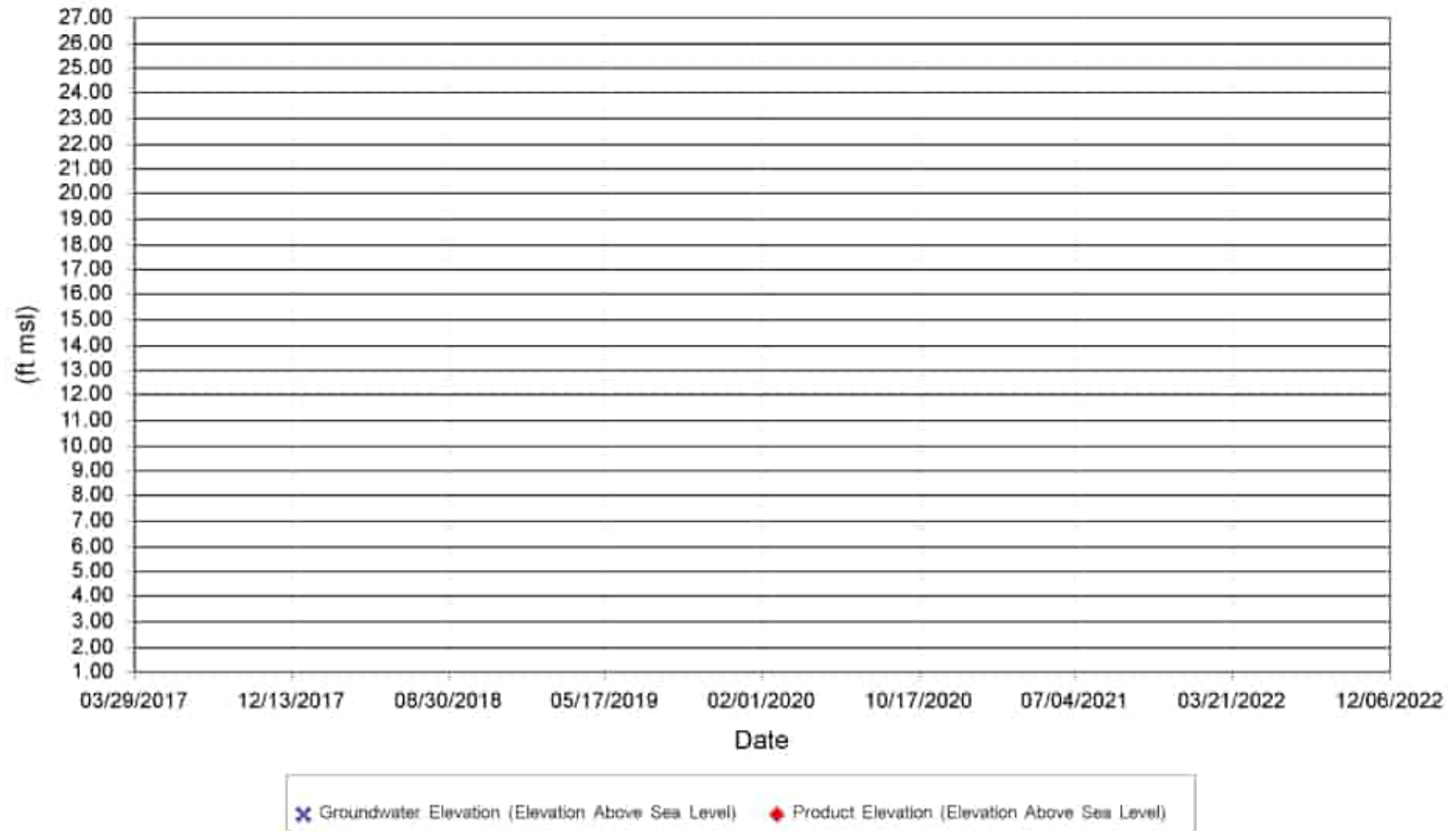
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-50 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-52 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

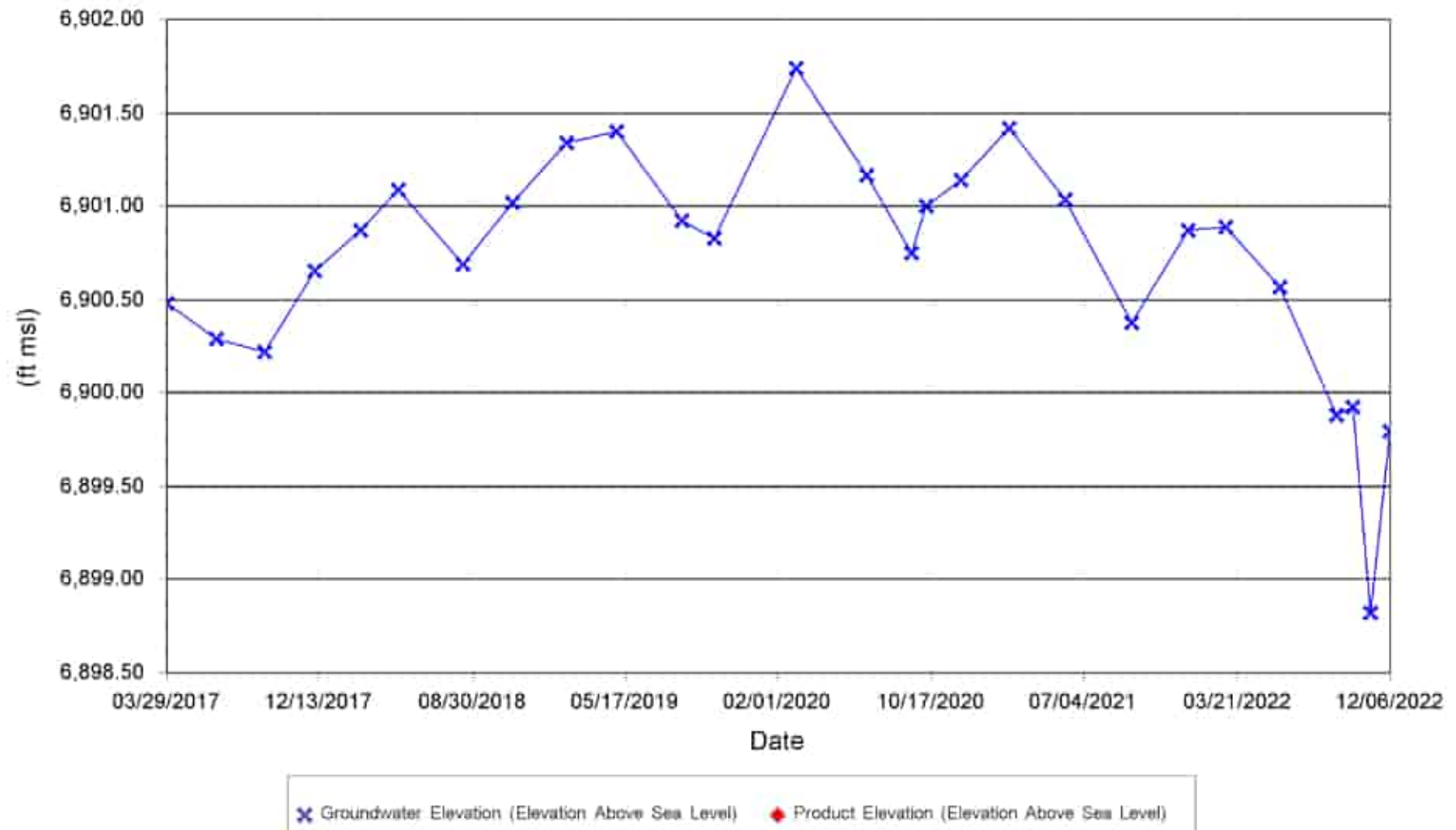
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-53 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

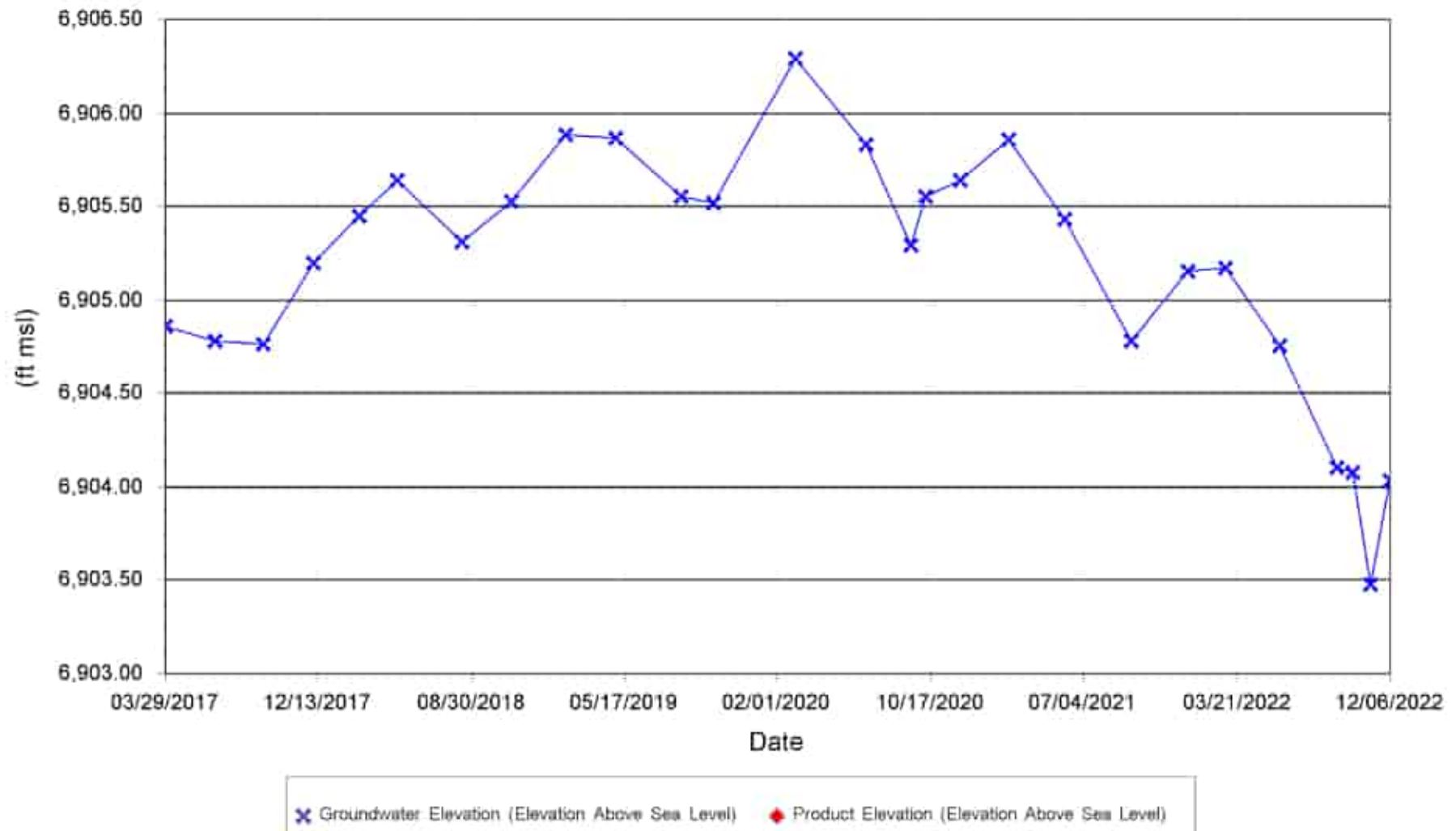
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-54 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

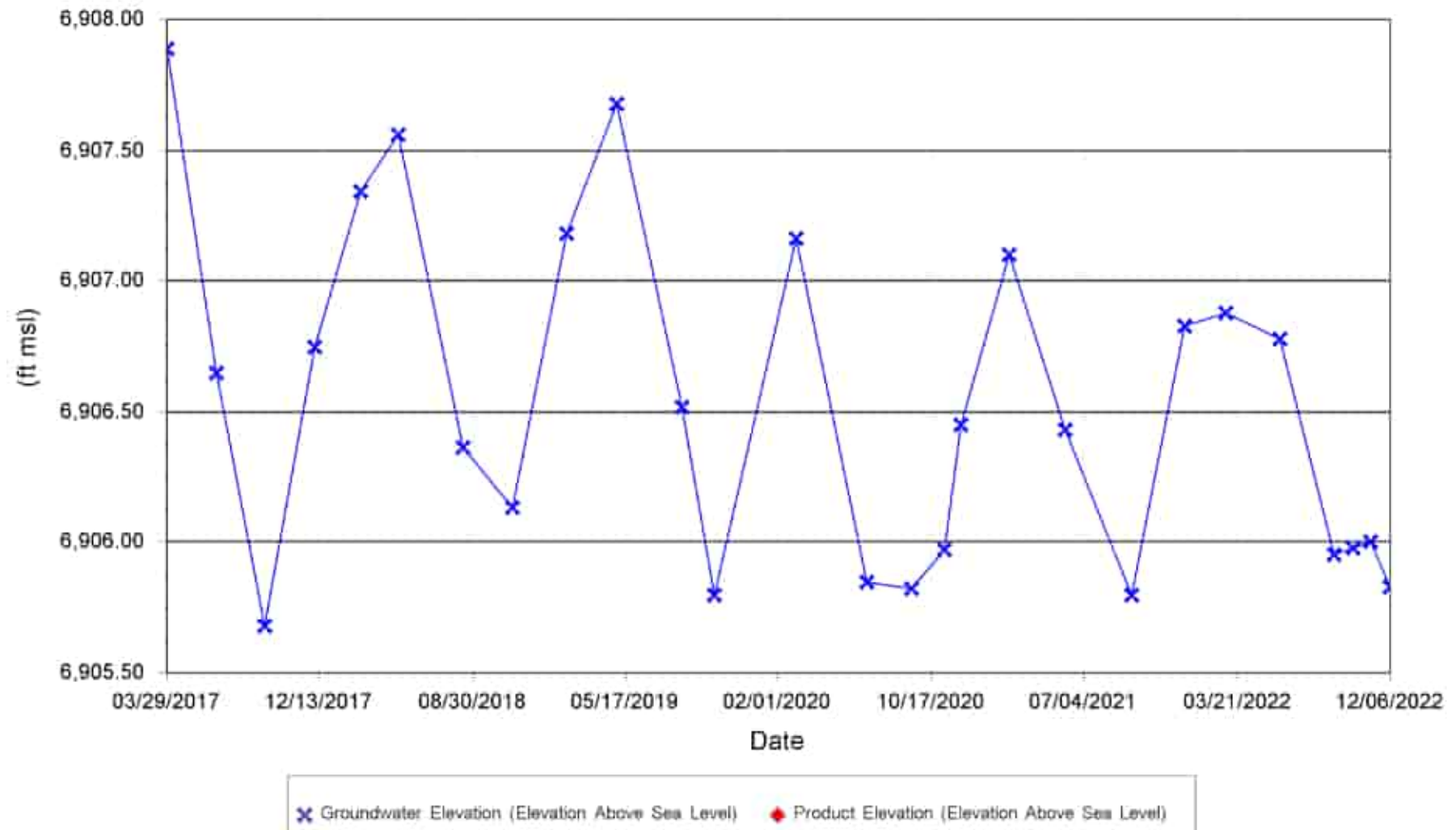
**APPENDIX B-2B. OW-55 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

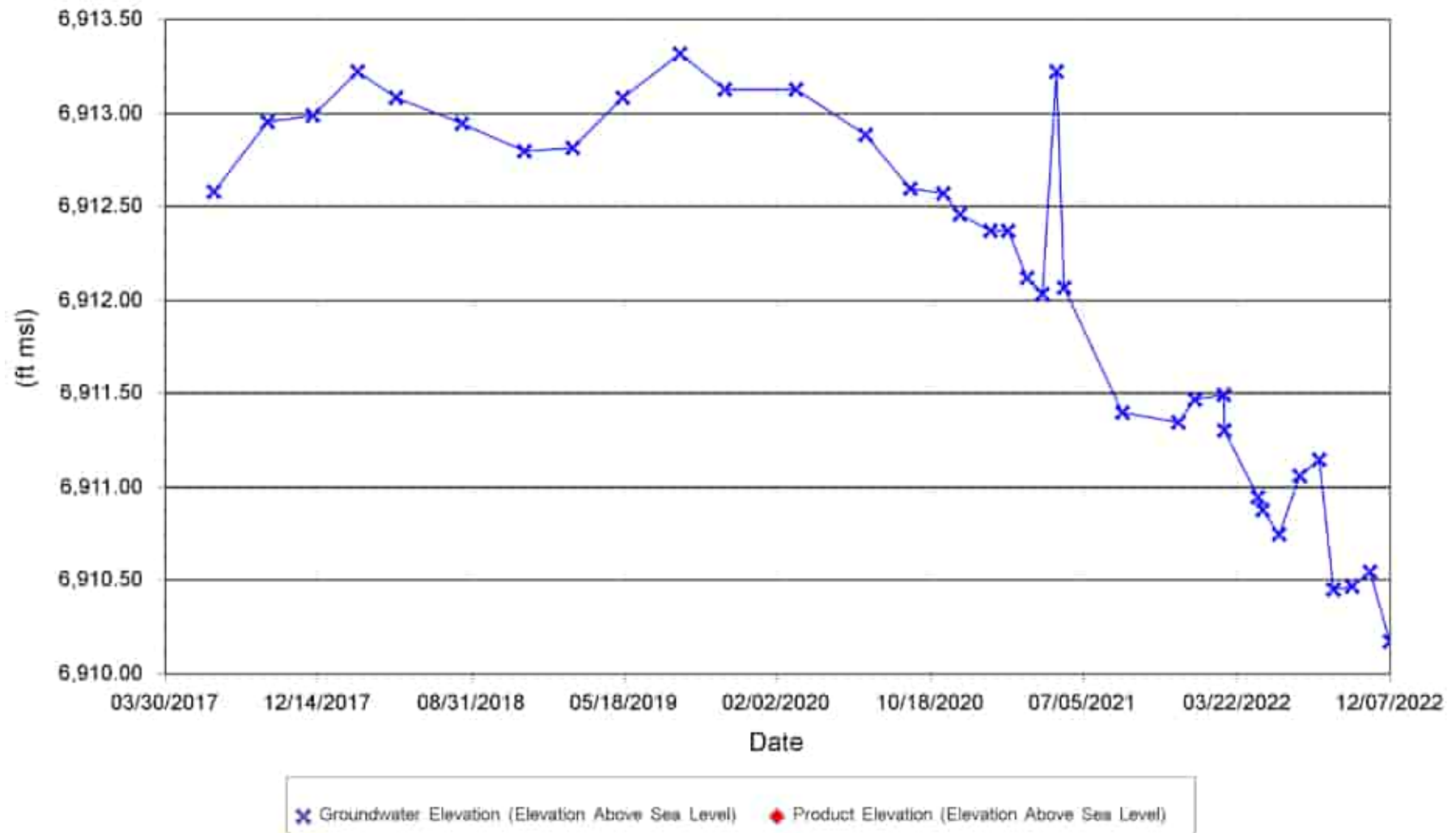
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

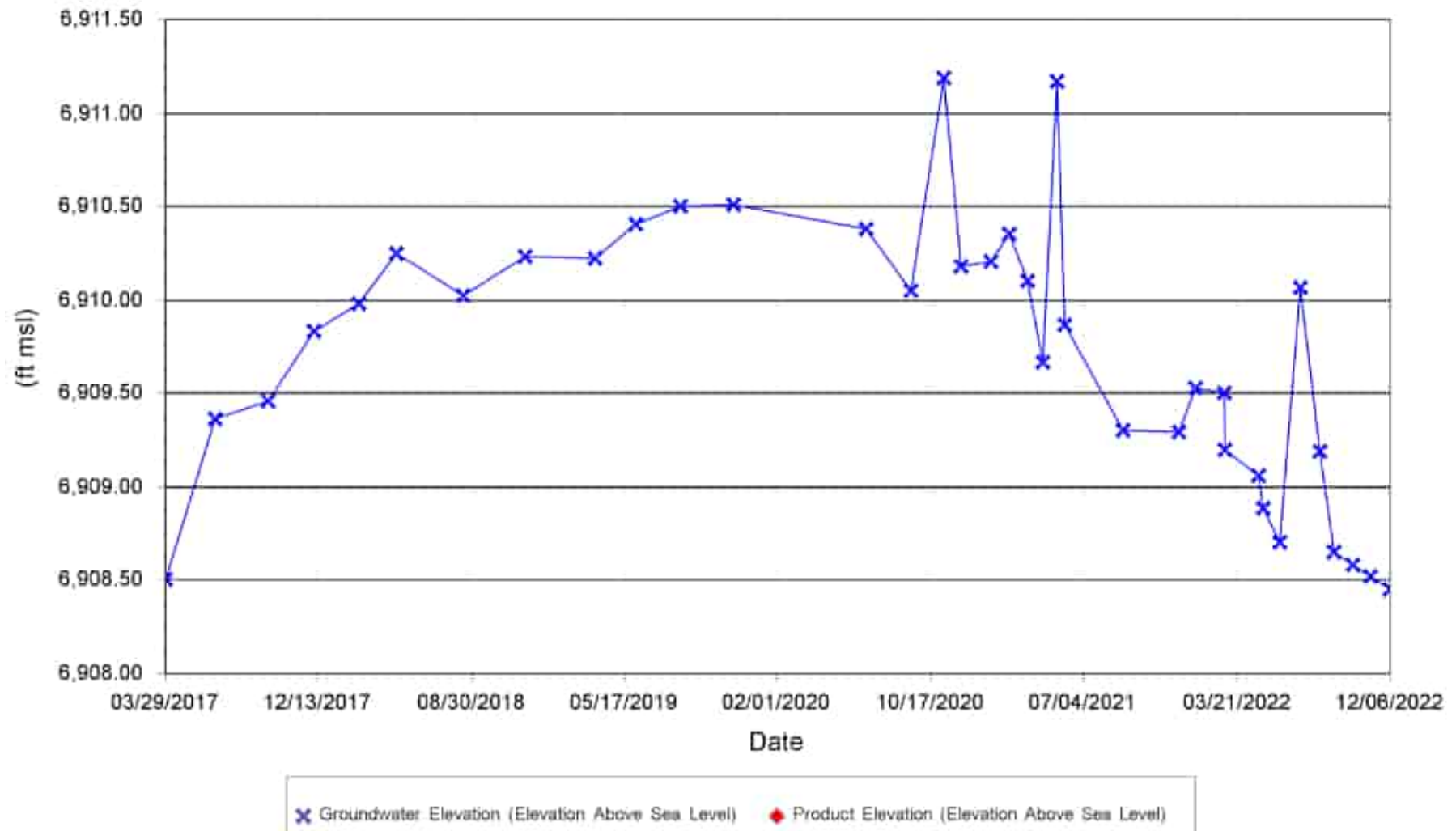
APPENDIX B-2B. OW-56 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-57 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

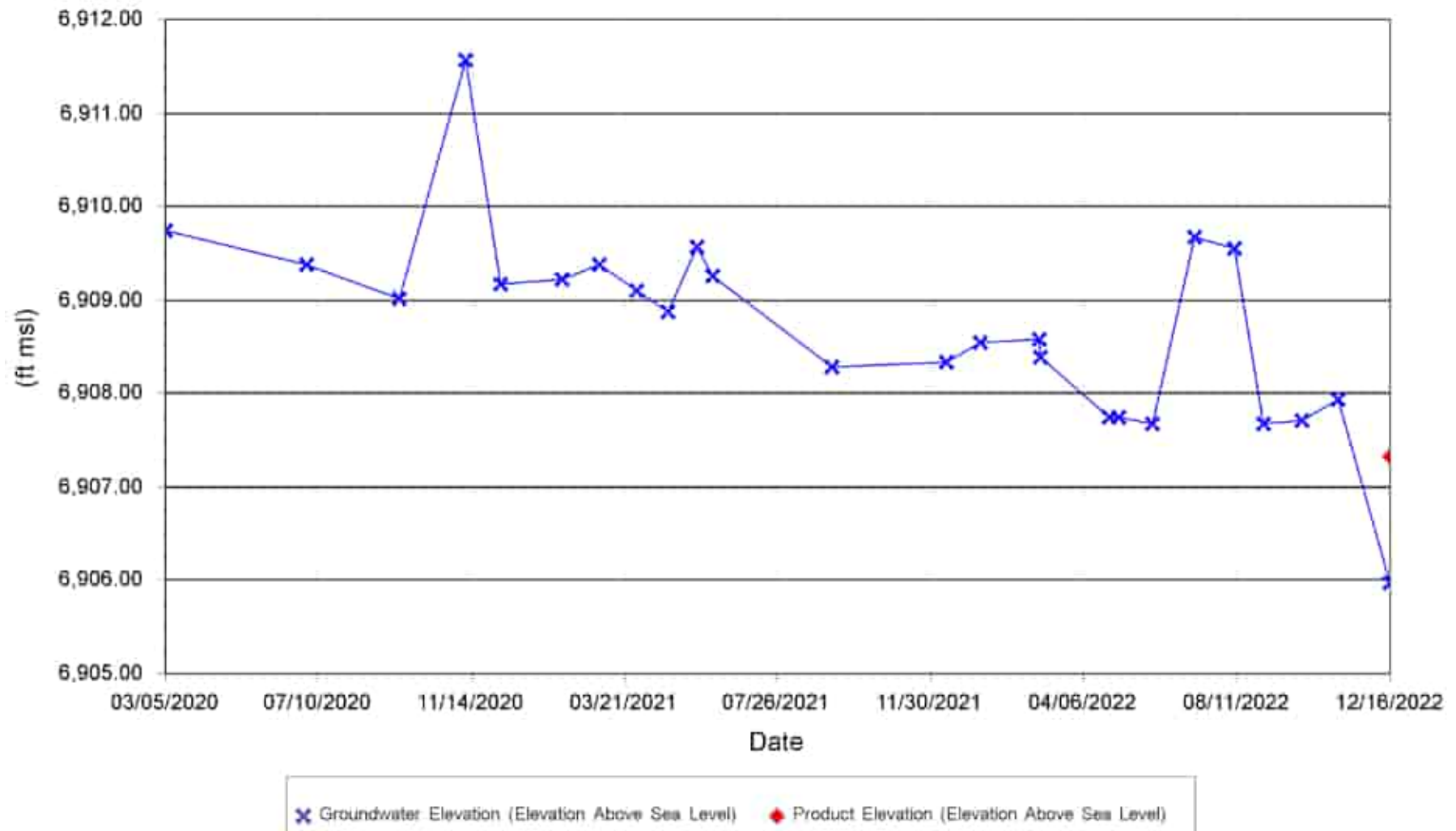
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-58 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

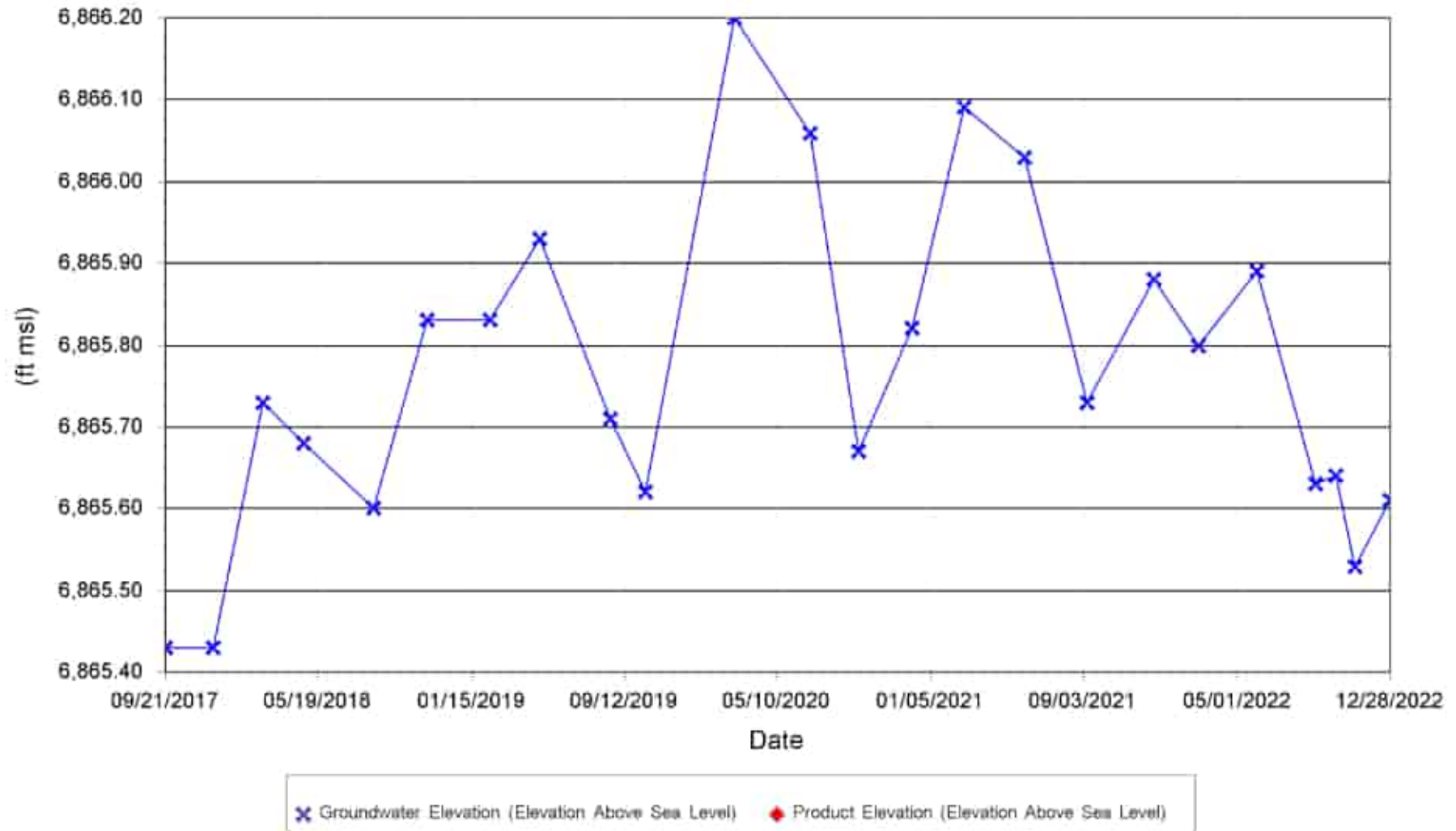
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

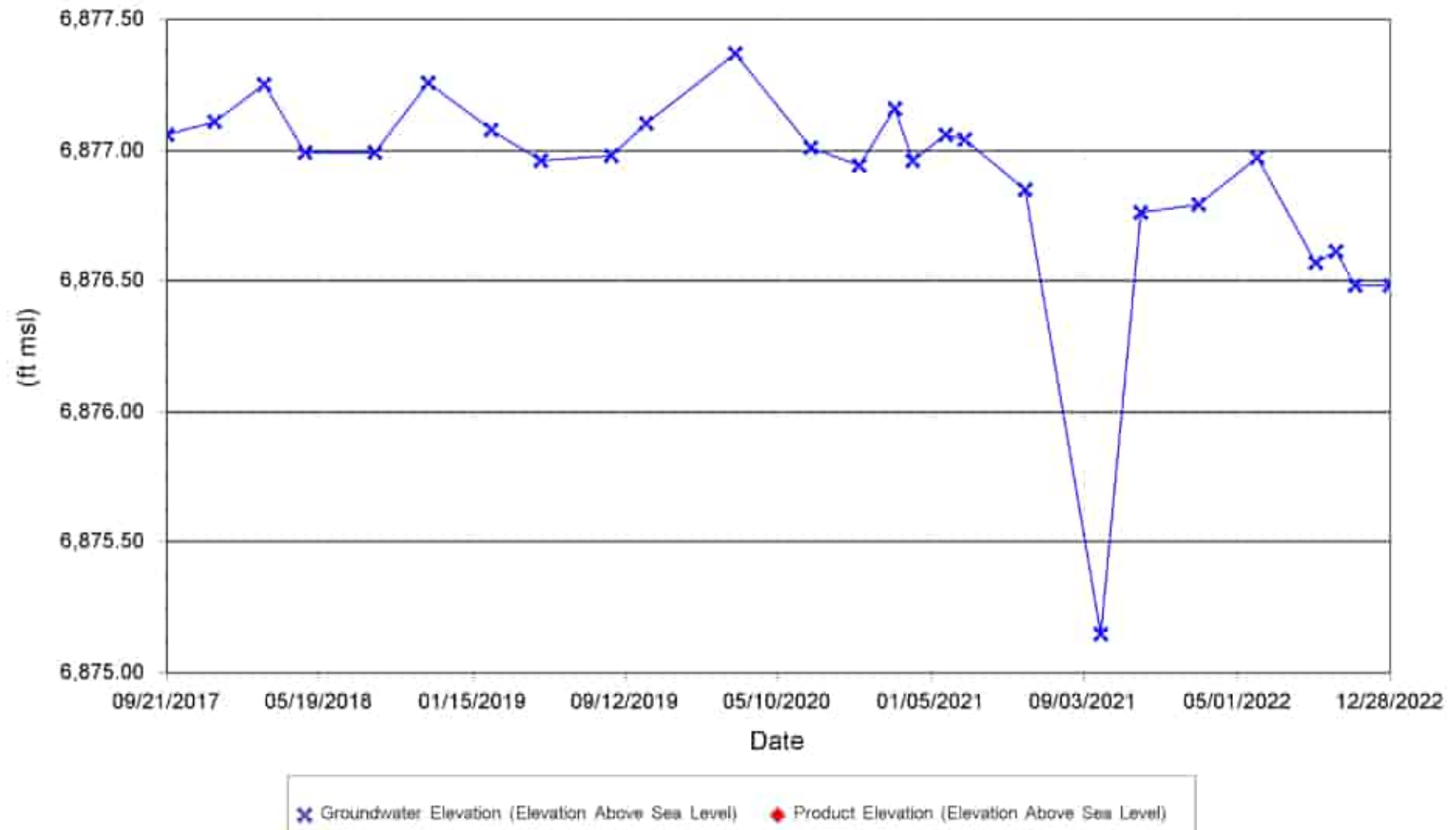
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-58A HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

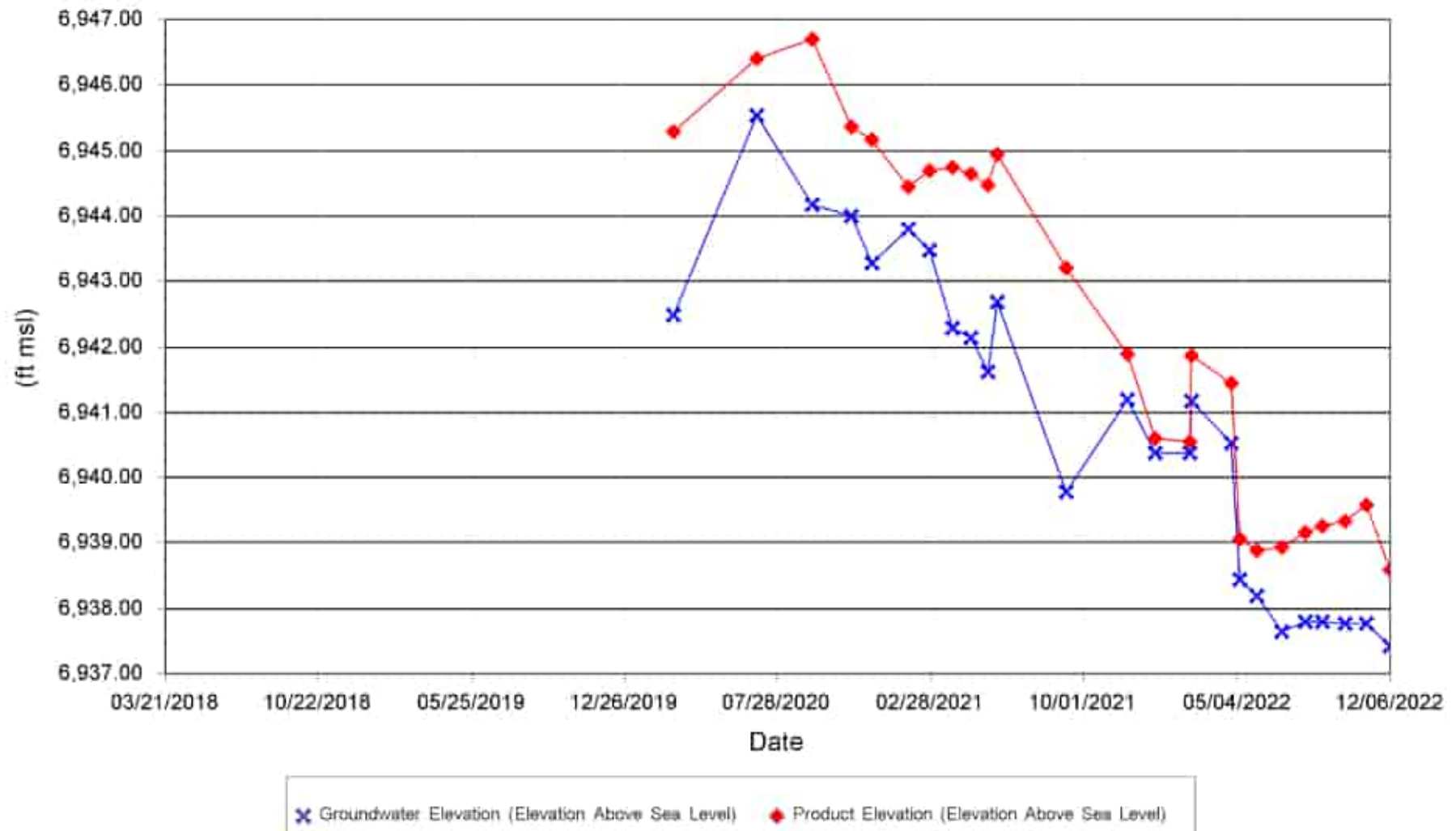
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-59 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-60 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

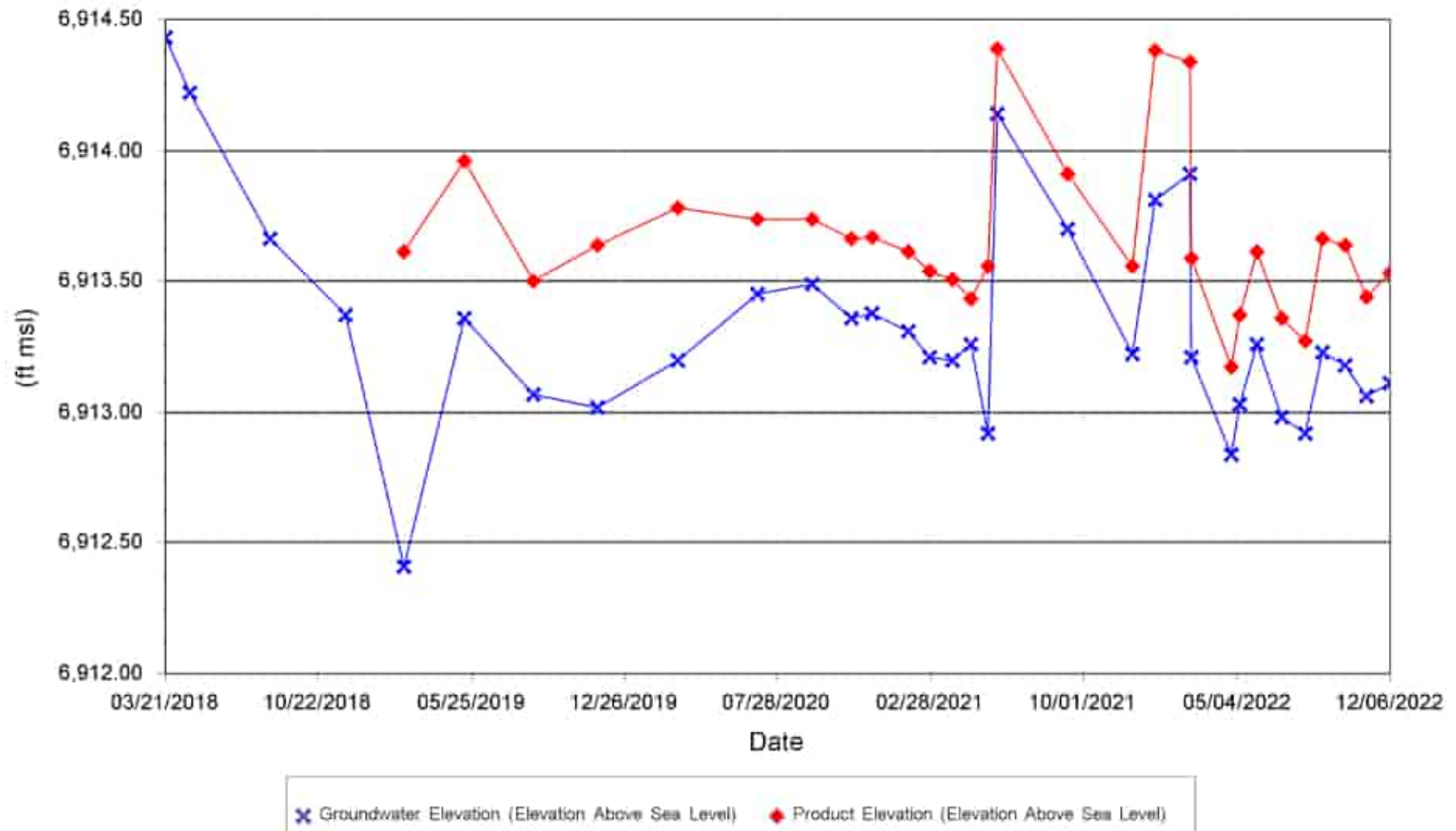
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

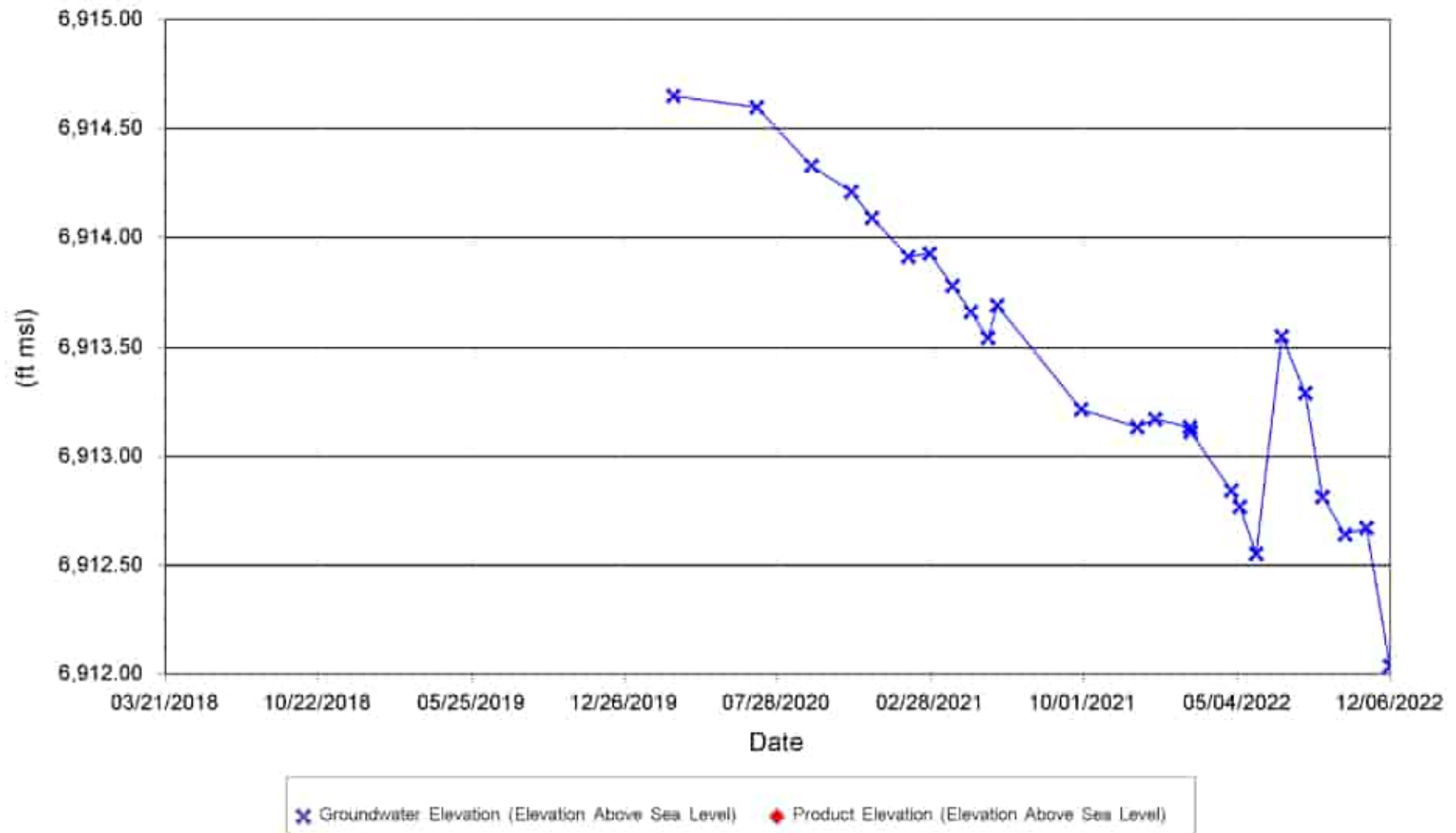
**APPENDIX B-2B. OW-61 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

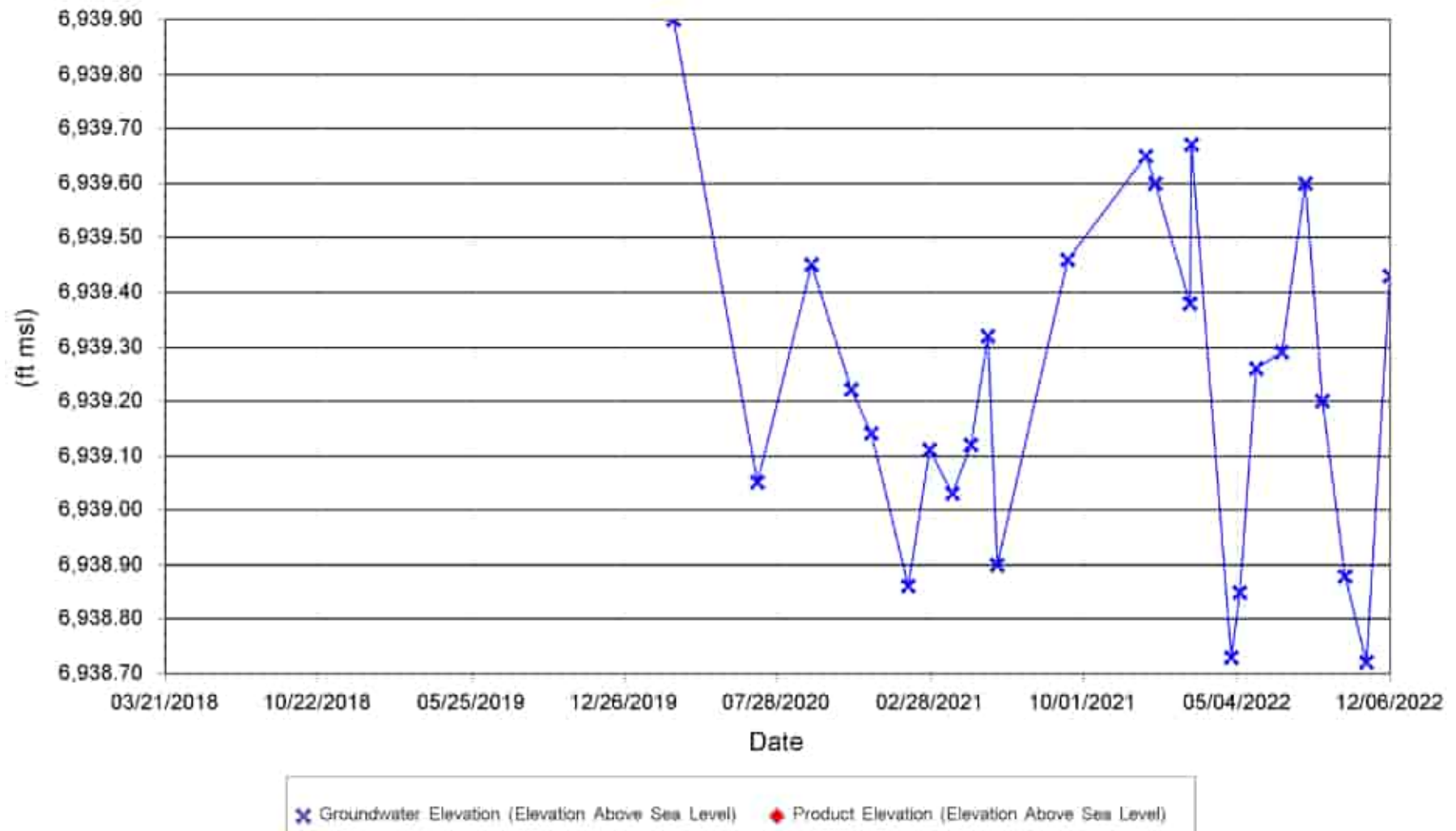
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-62 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

**APPENDIX B-2B. OW-63 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

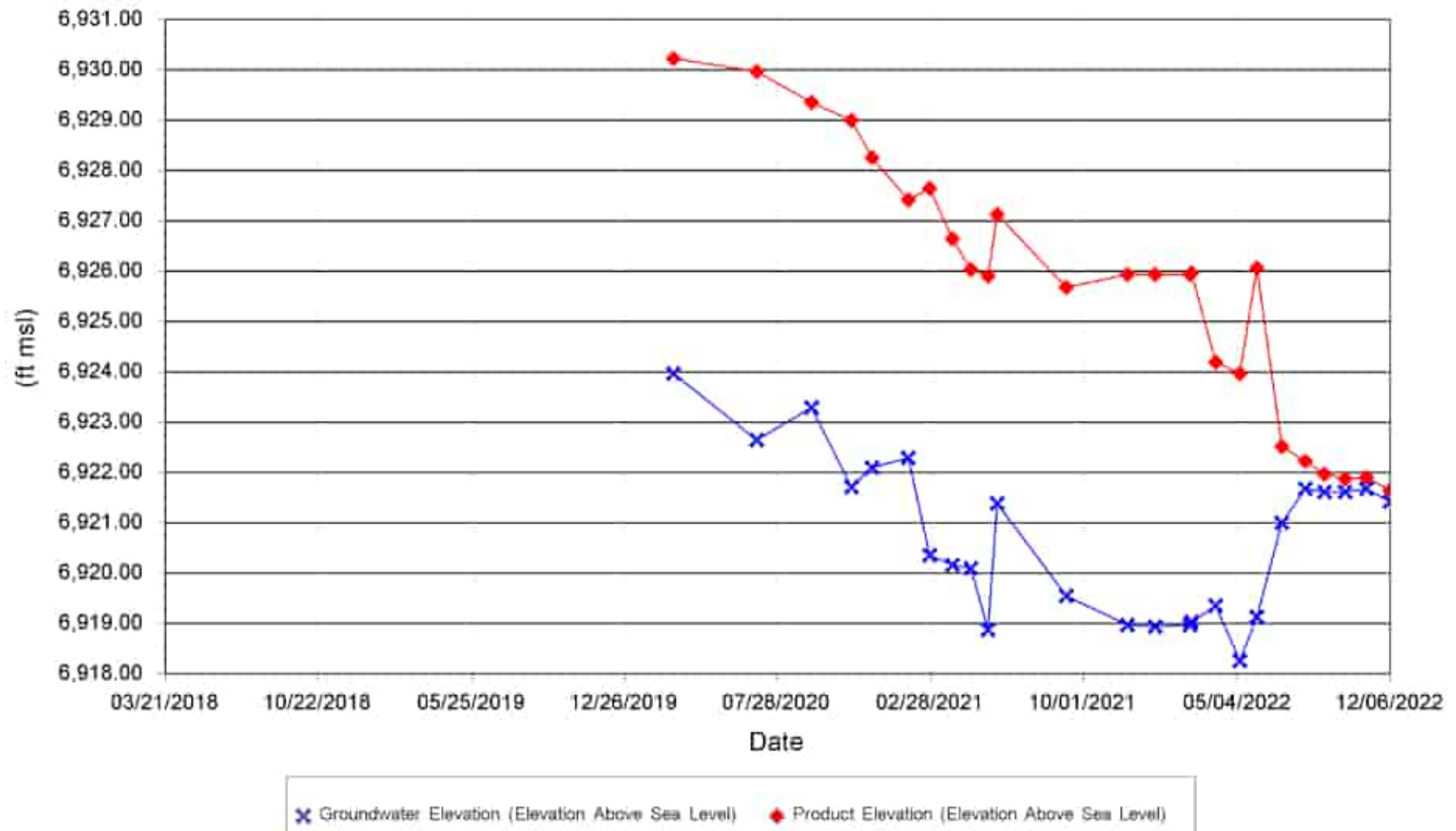
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-64 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

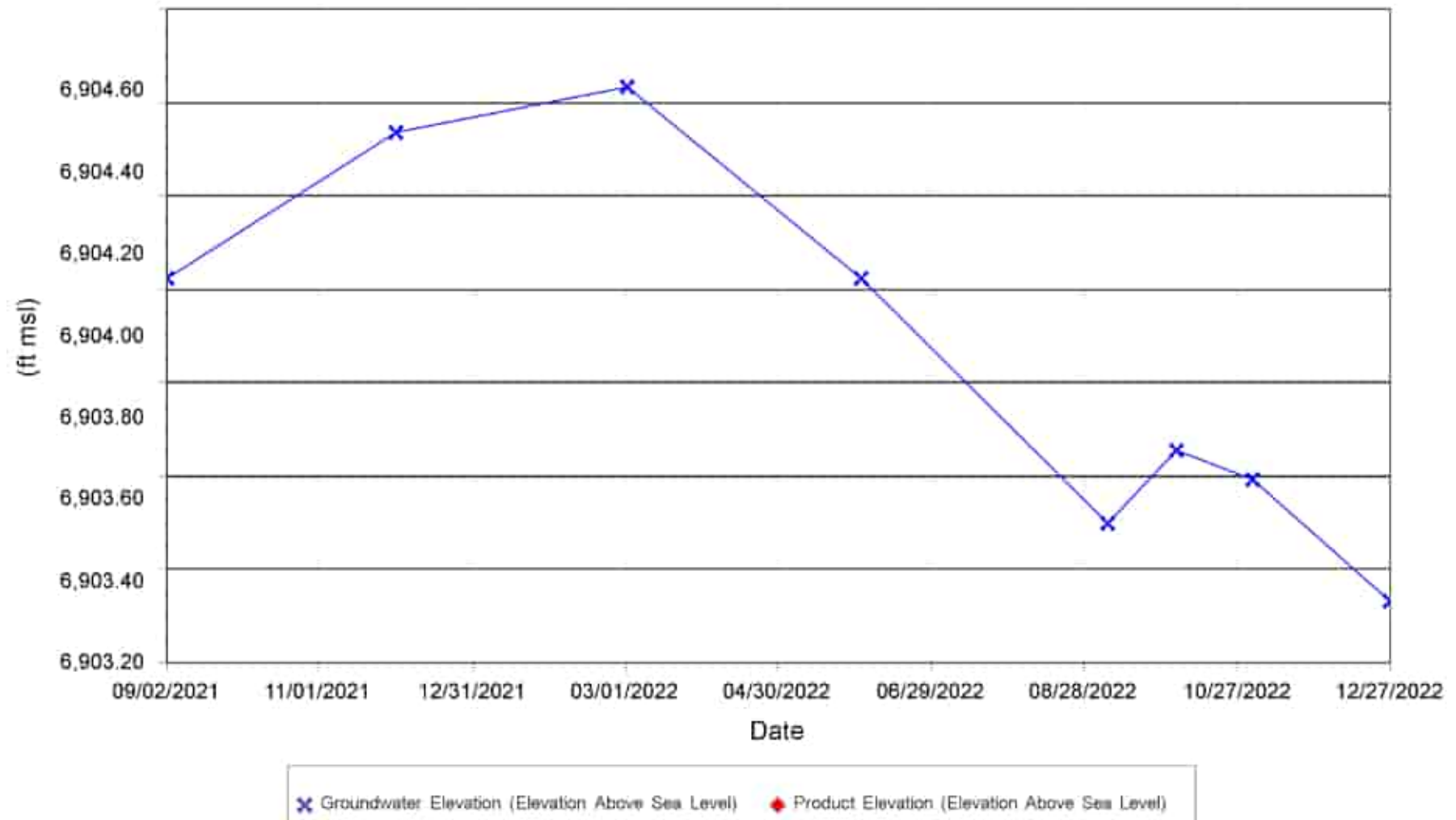
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

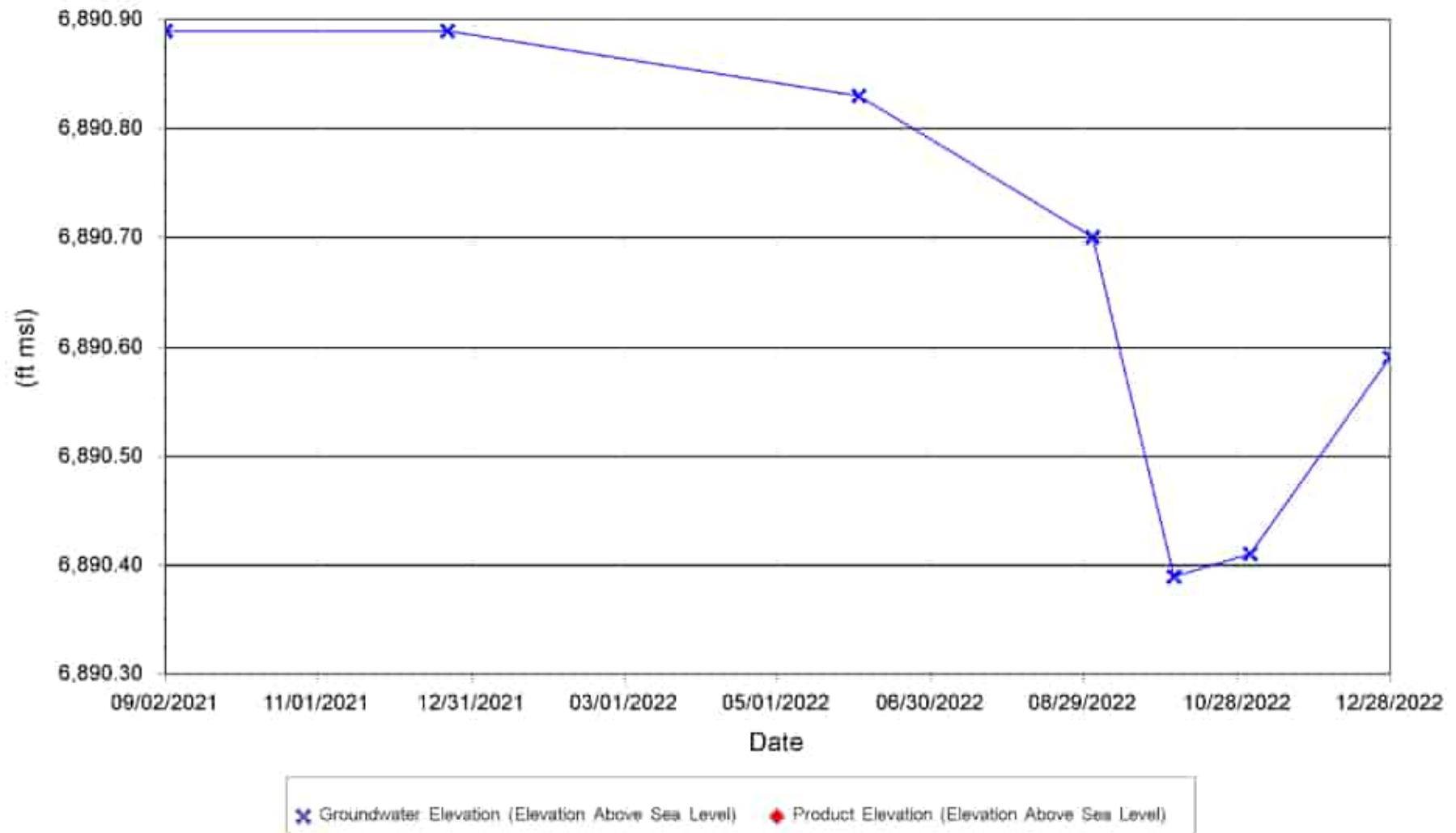
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-65 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-66 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

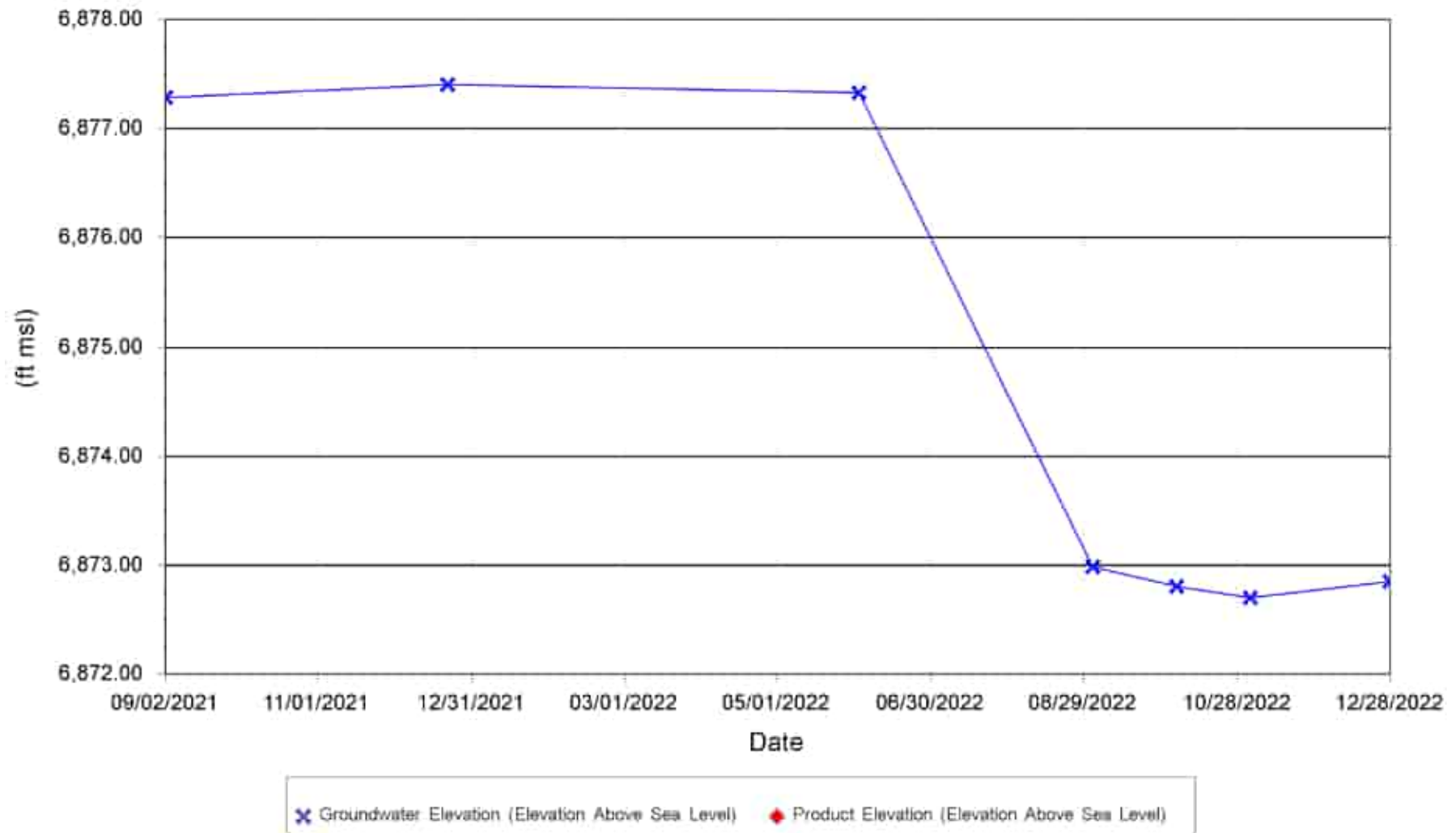
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-67 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

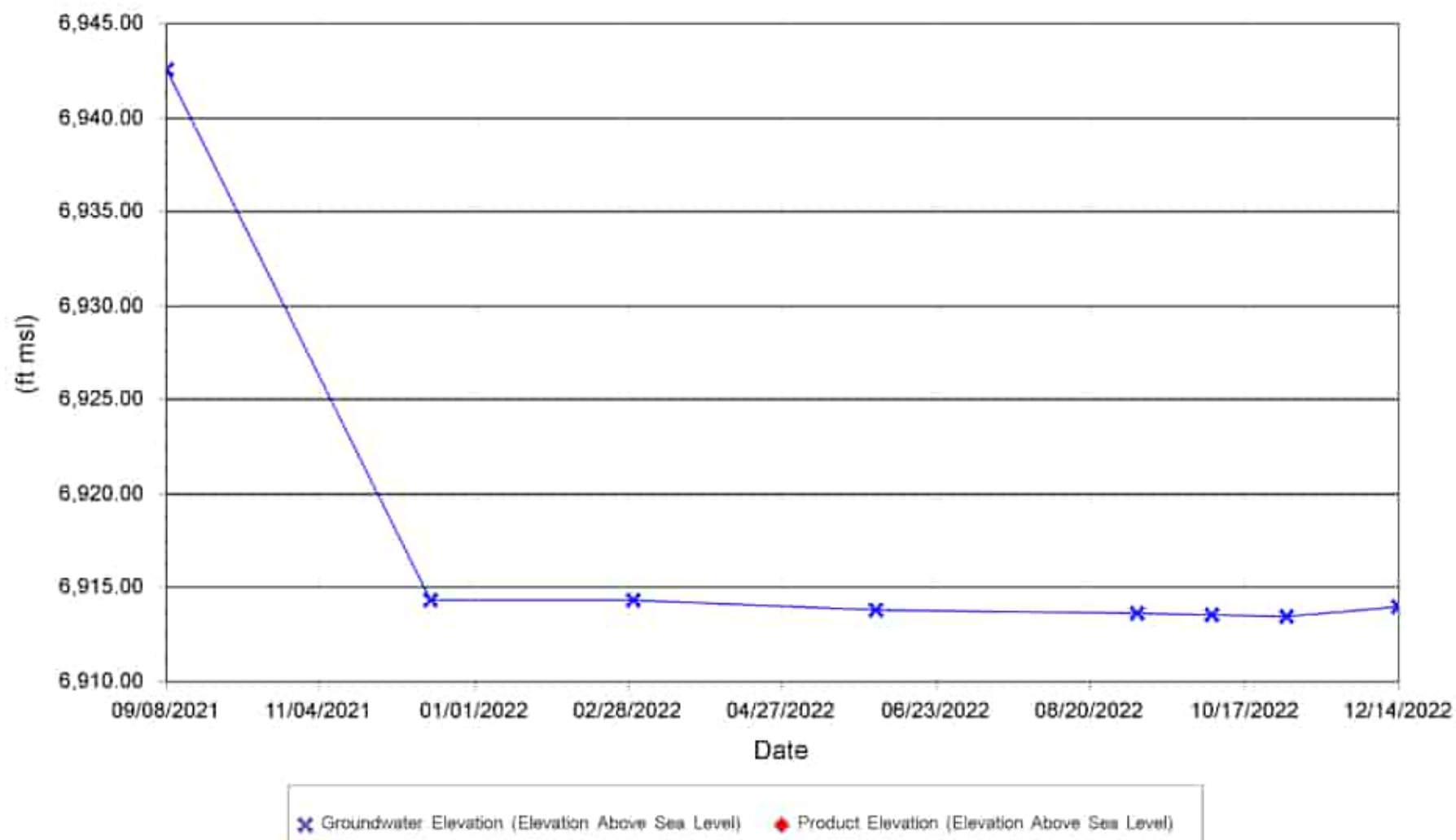
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. OW-68 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

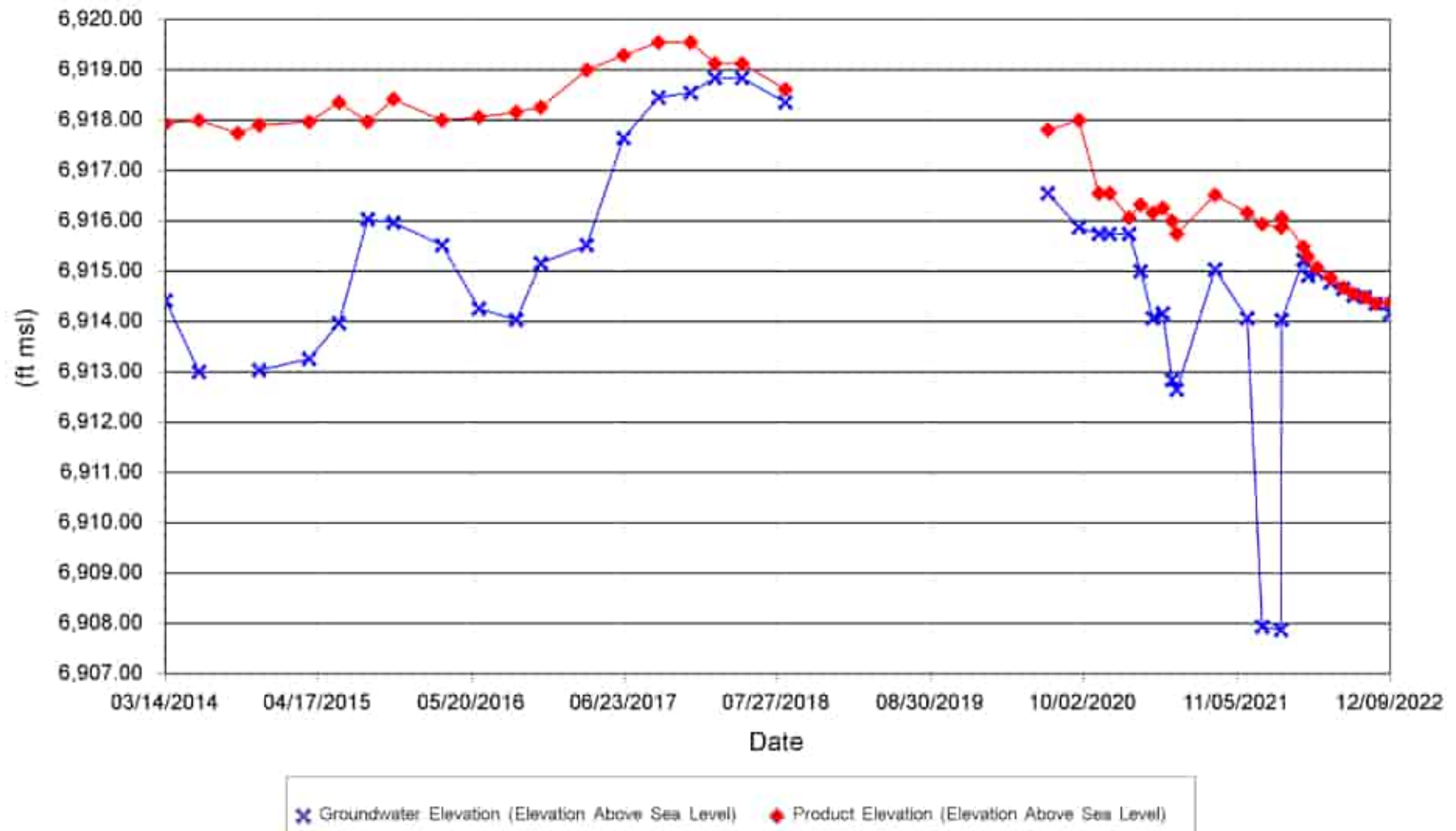
**APPENDIX B-2B. OW-70 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. RW-1 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER

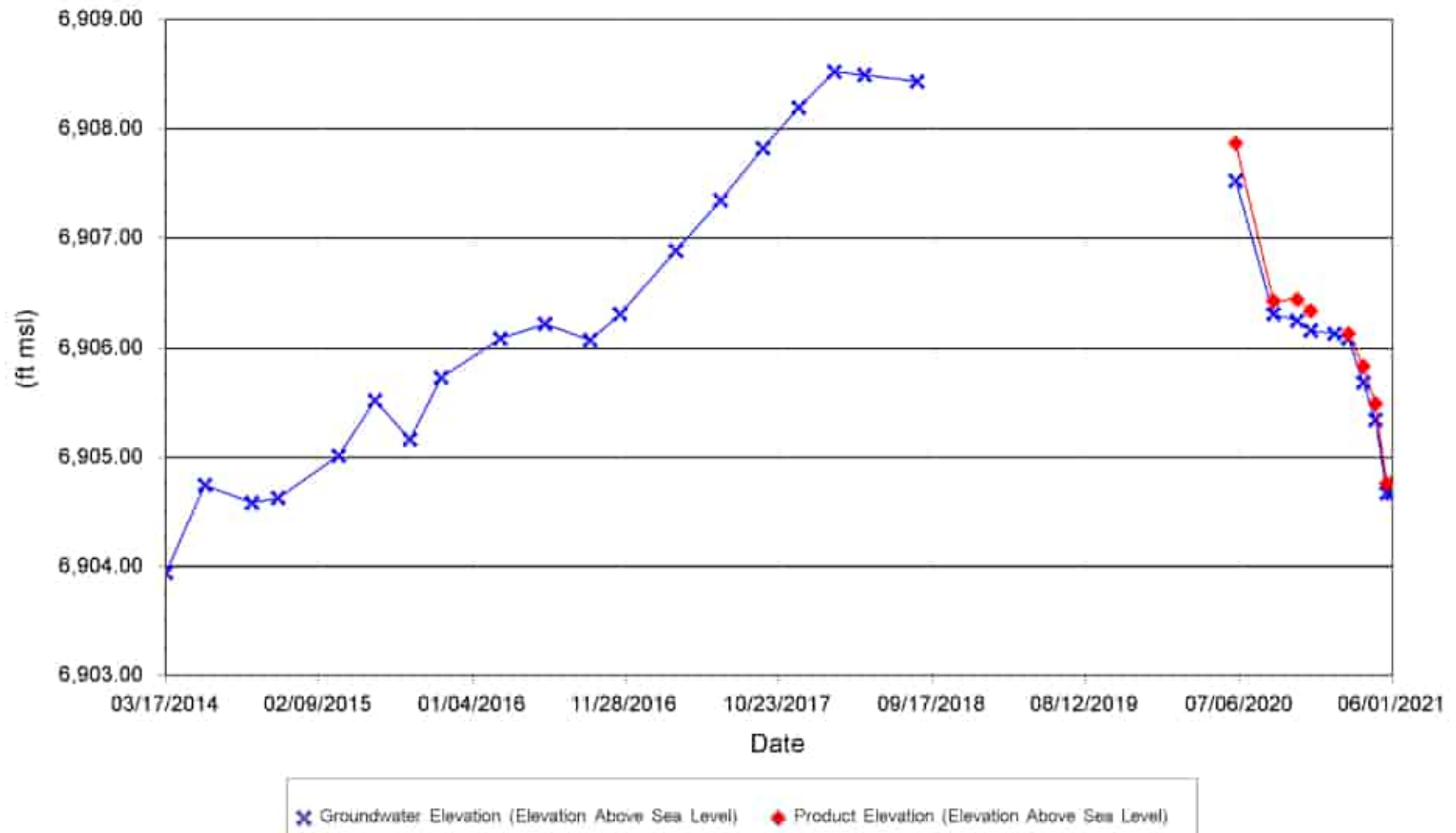


Notes:

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

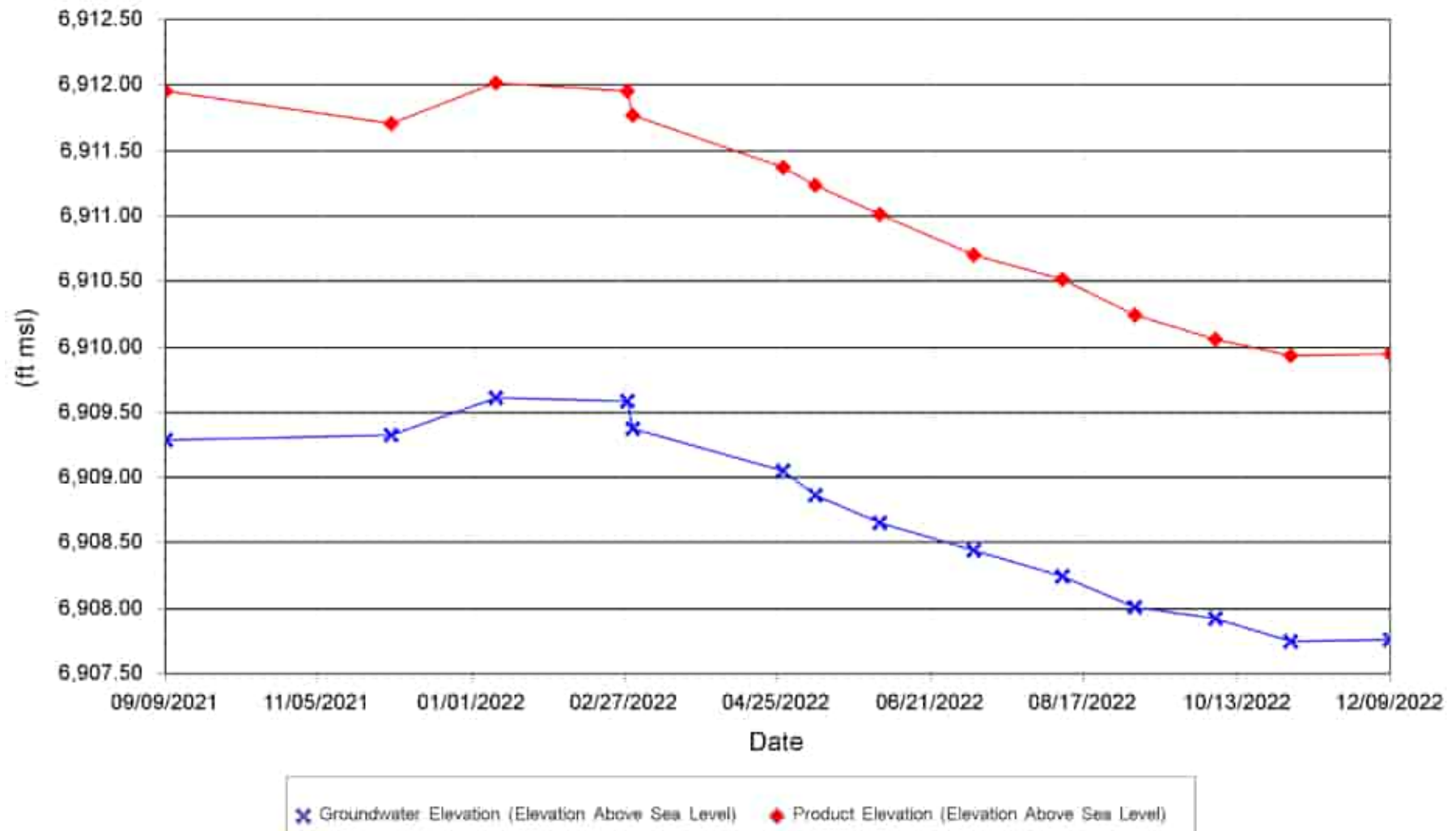
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. RW-2 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

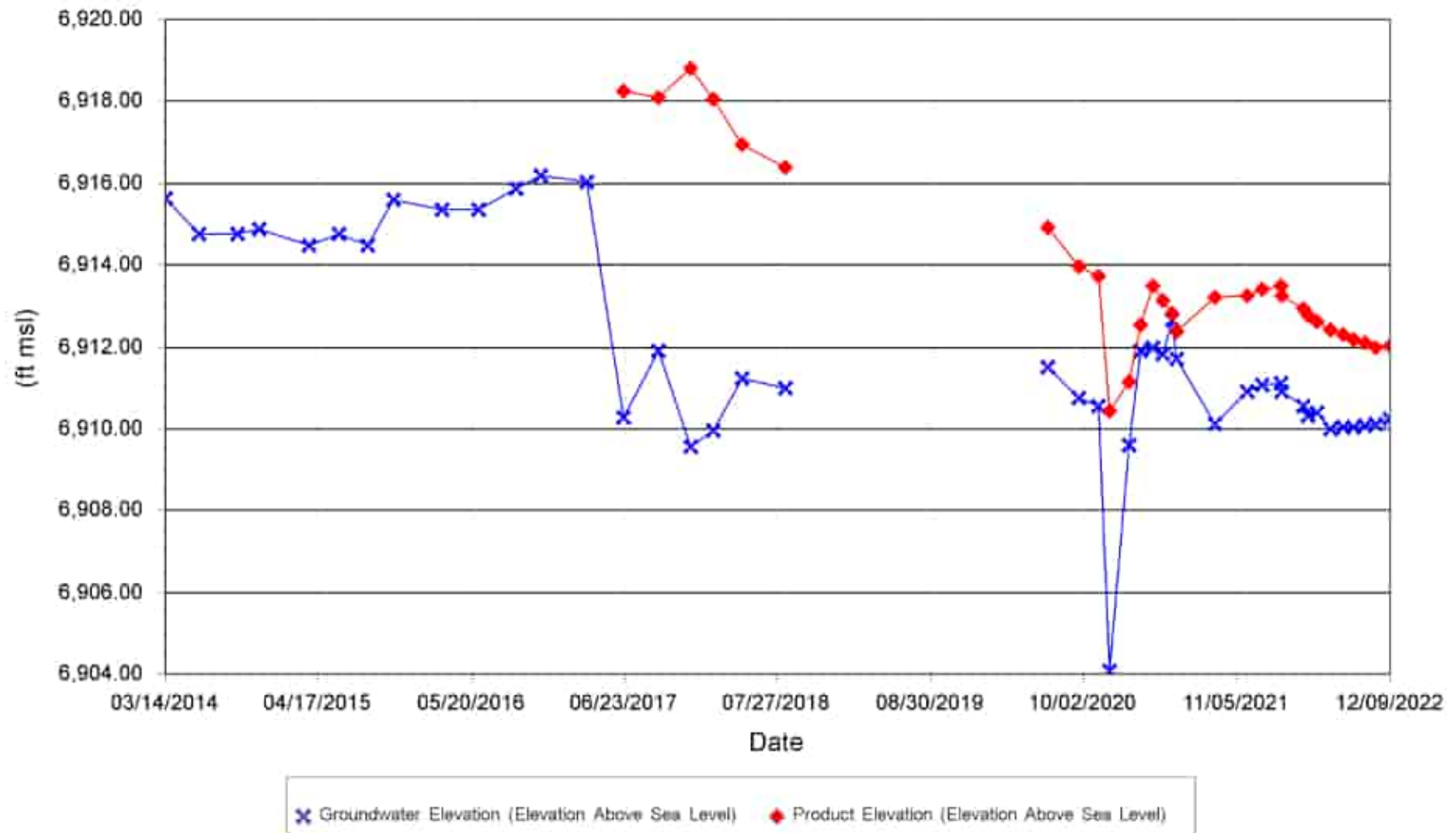
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. RW-2R HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

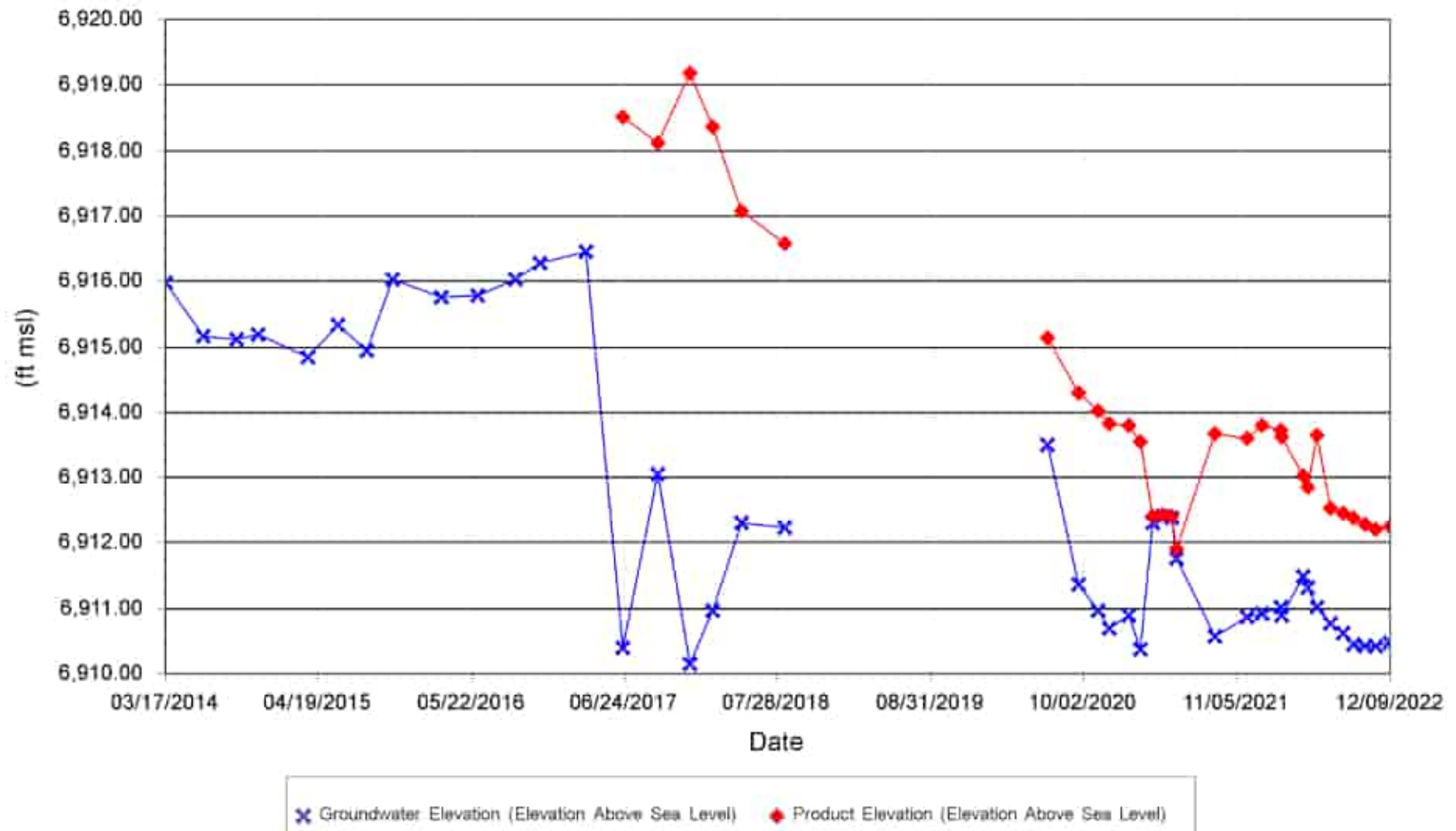
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

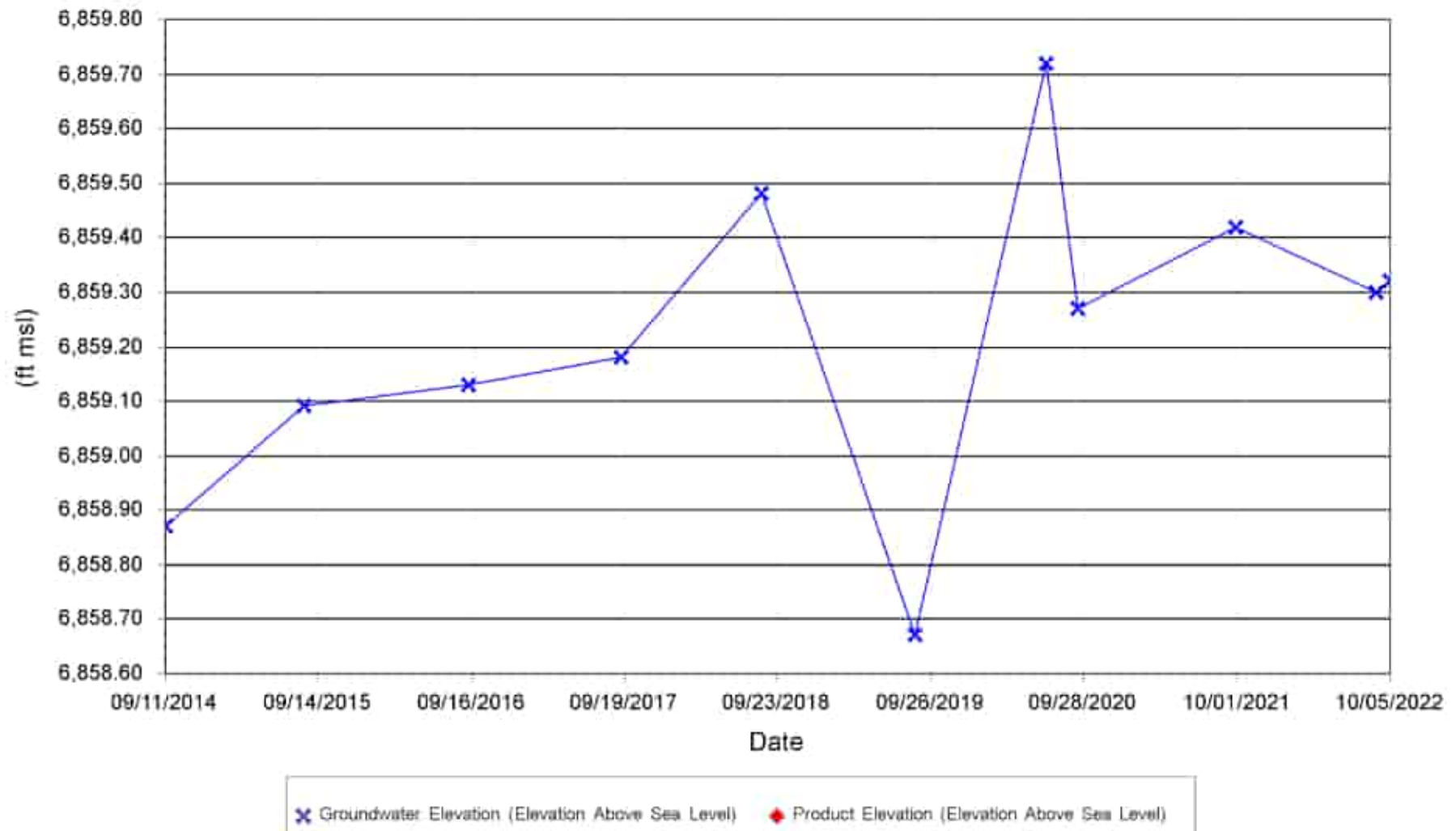
**APPENDIX B-2B. RW-5 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

APPENDIX B-2B. RW-6 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS CHINLE/ALLUVIUM AQUIFER



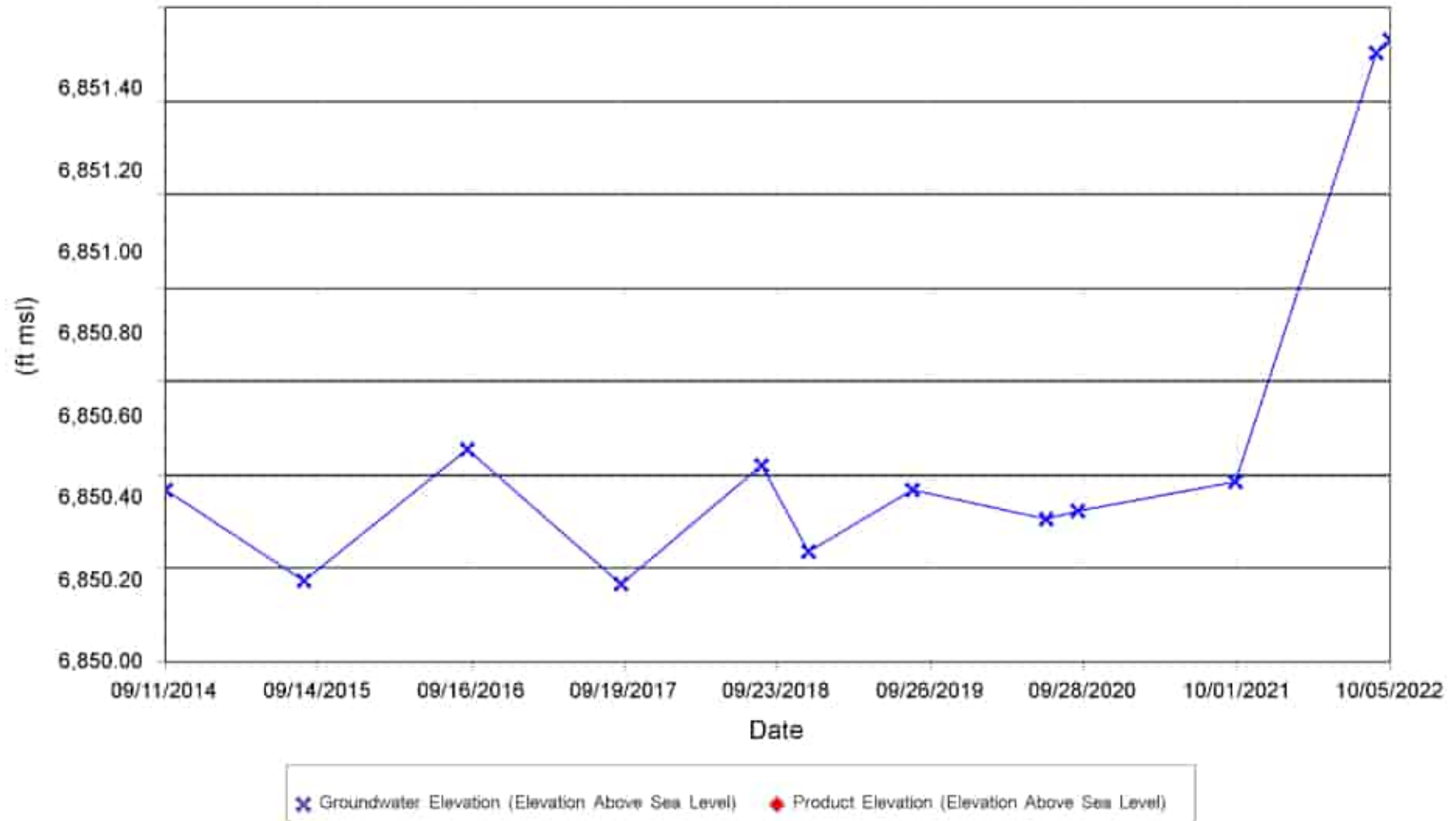
Notes:
 SPH - Separate Phase Hydrocarbon
 ft msl - feet above mean sea level
 A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. SMW-2 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2B. SMW-4 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

Groundwater Elevation (ft msl)

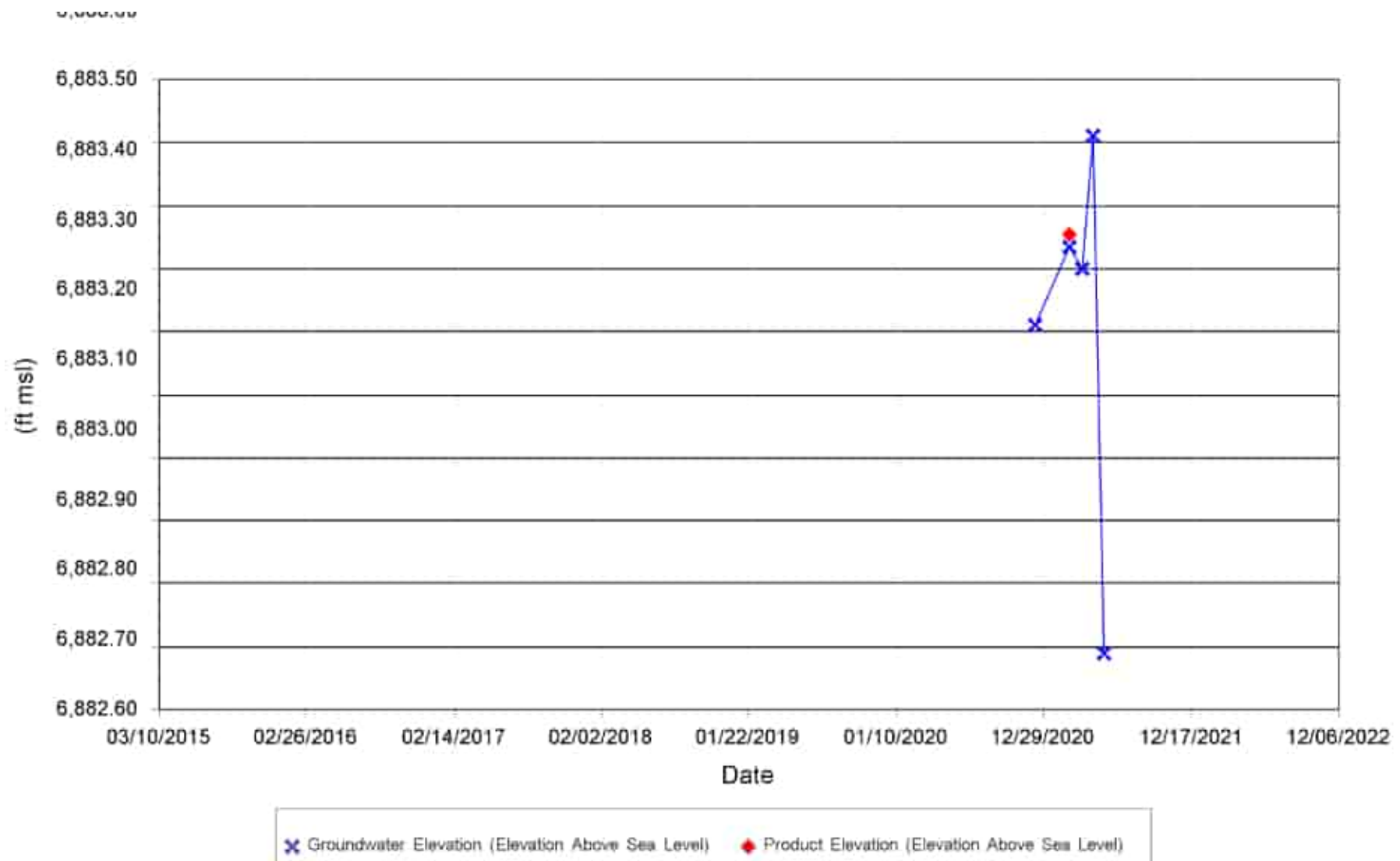
Date

Legend:

- Groundwater Elevation (Elevation Above Sea Level)
- Product Elevation (Elevation Above Sea Level)

100 of 101

Released to Imaging: 8/14/2026 5:09:31 PM

**APPENDIX B-2B. STP1-SW HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
CHINLE/ALLUVIUM AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

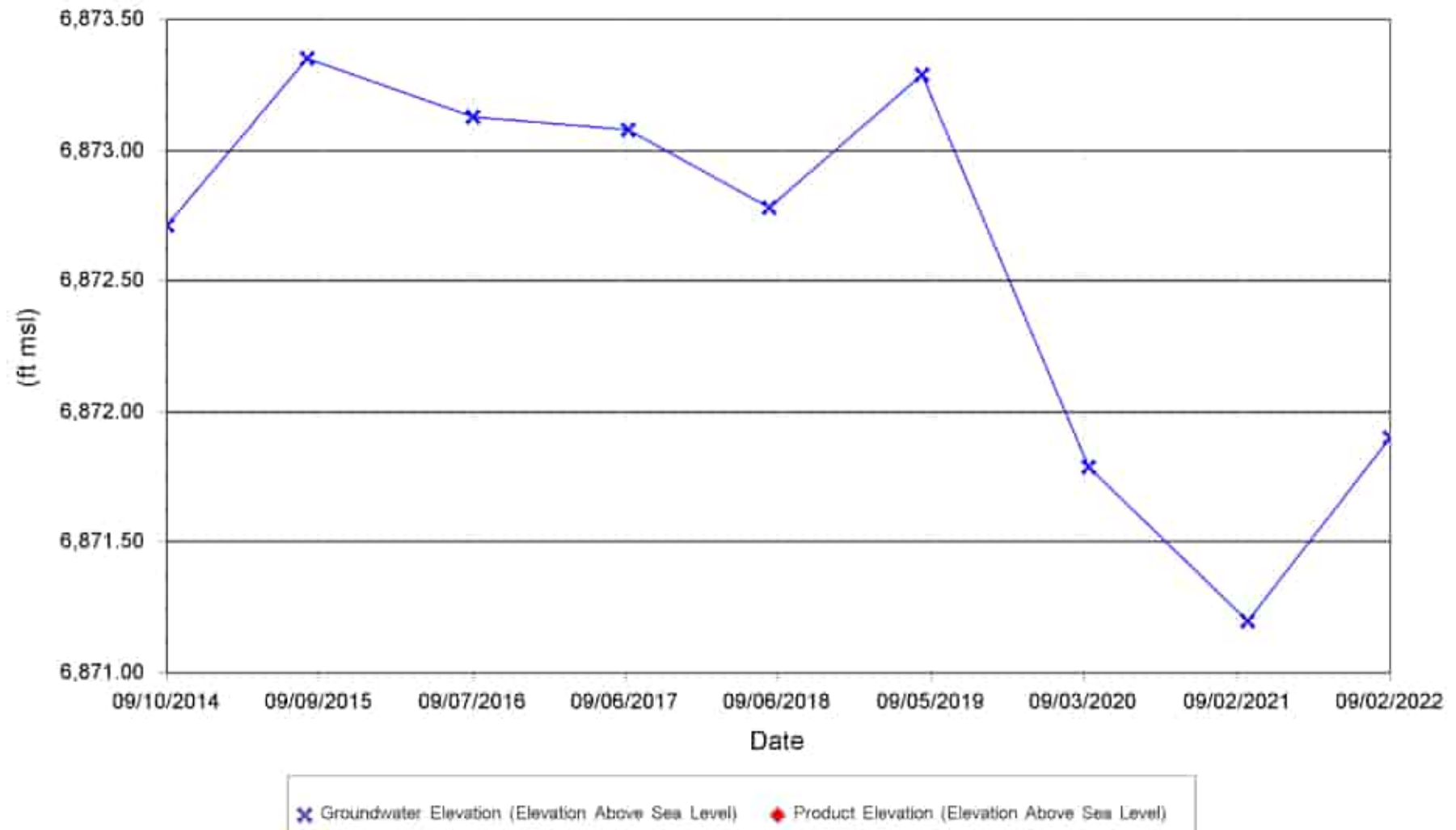
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
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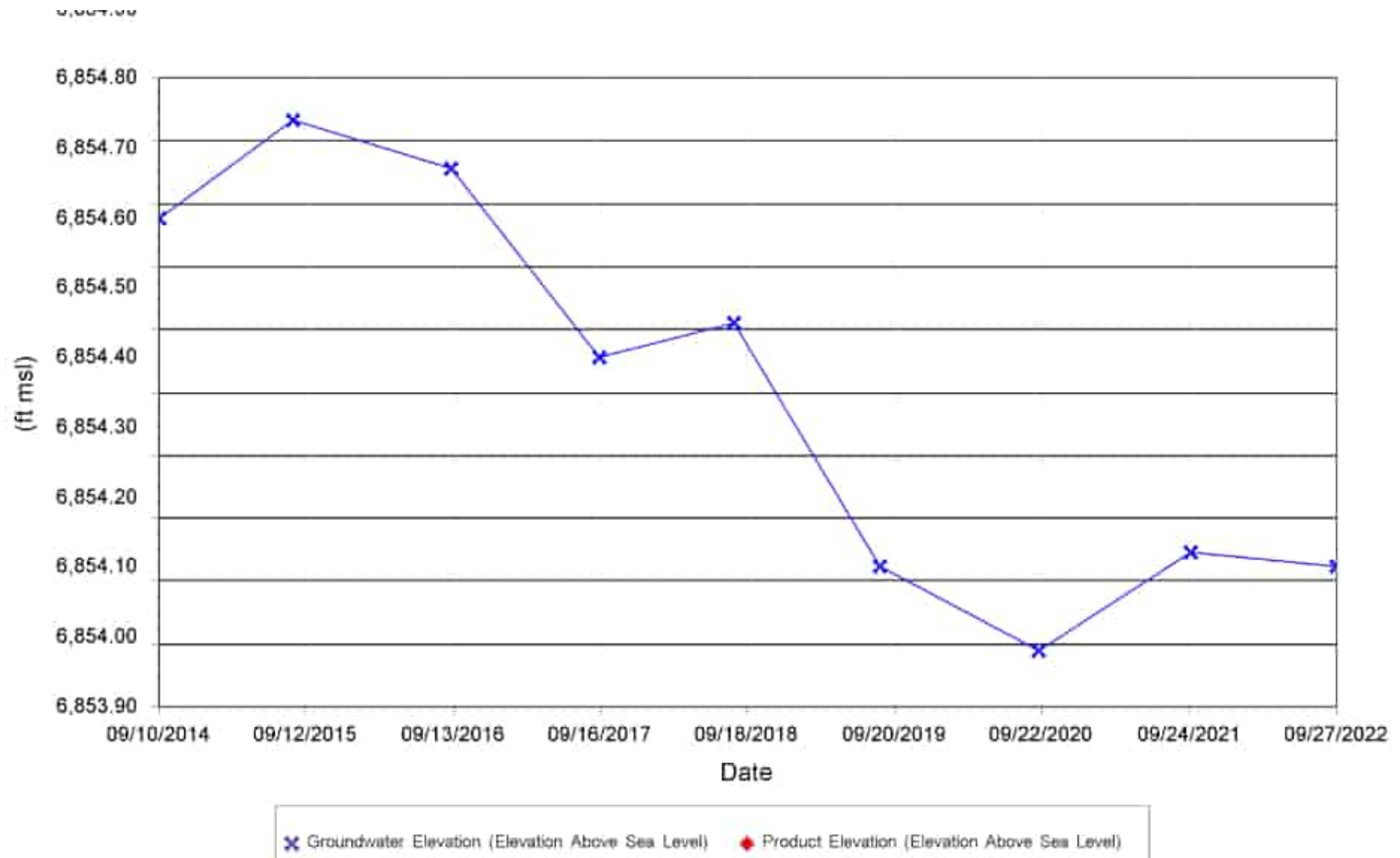
Appendix B-2C. Historical Groundwater Elevations and SPH Thicknesses – Sonsela Aquifer

**APPENDIX B-2C. BW-1C HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

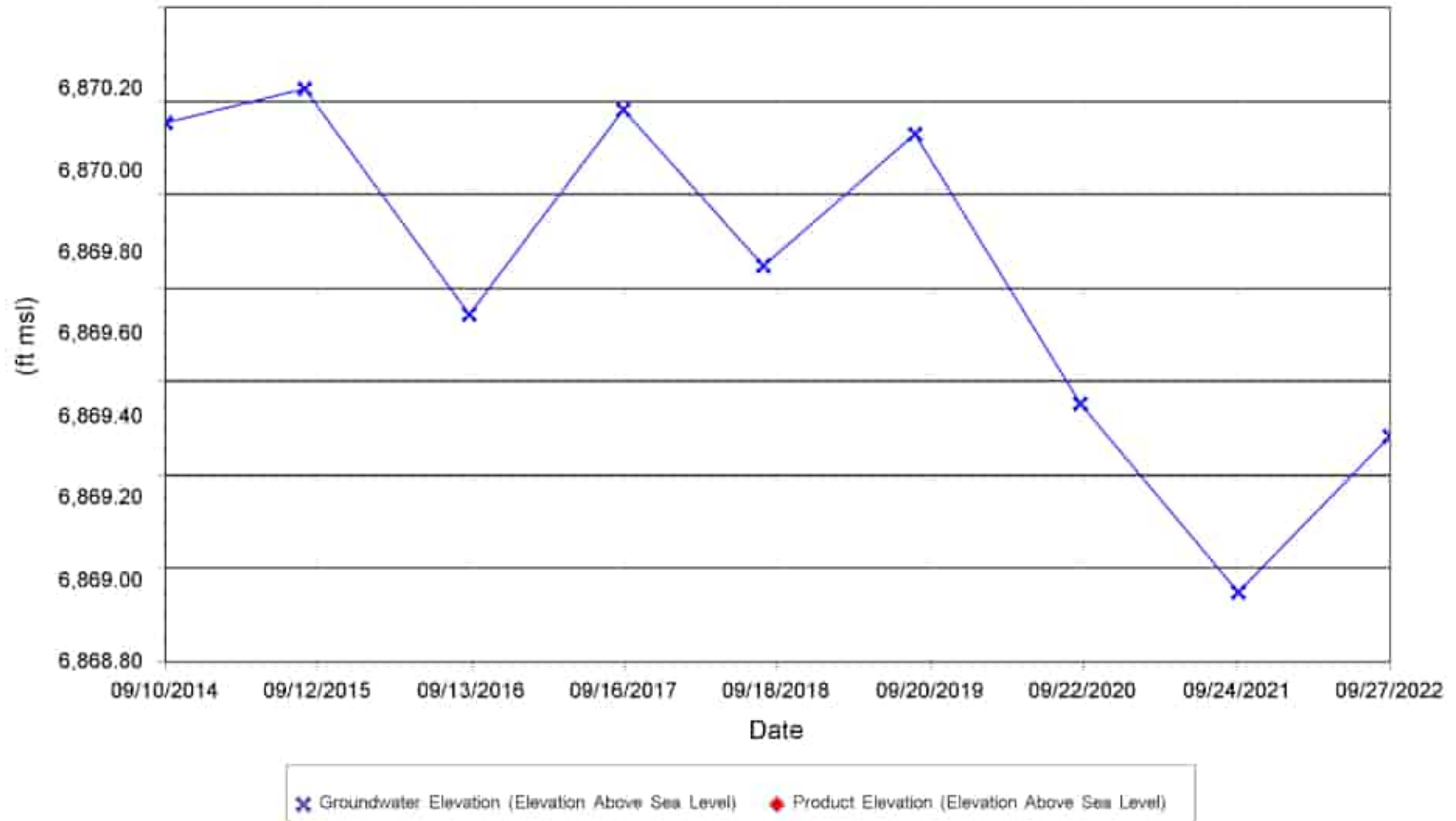
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. BW-2C HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

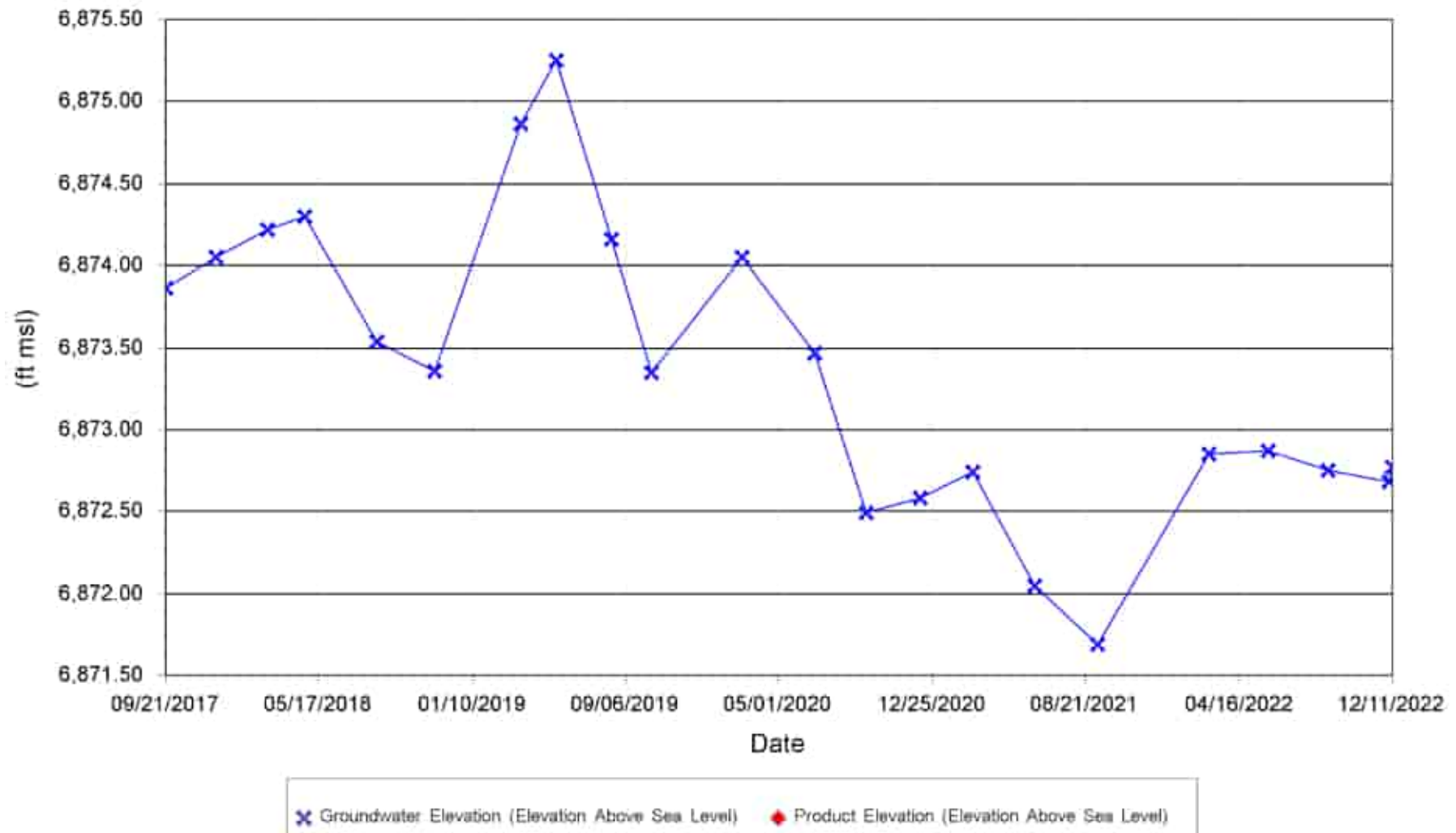
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. BW-3C HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

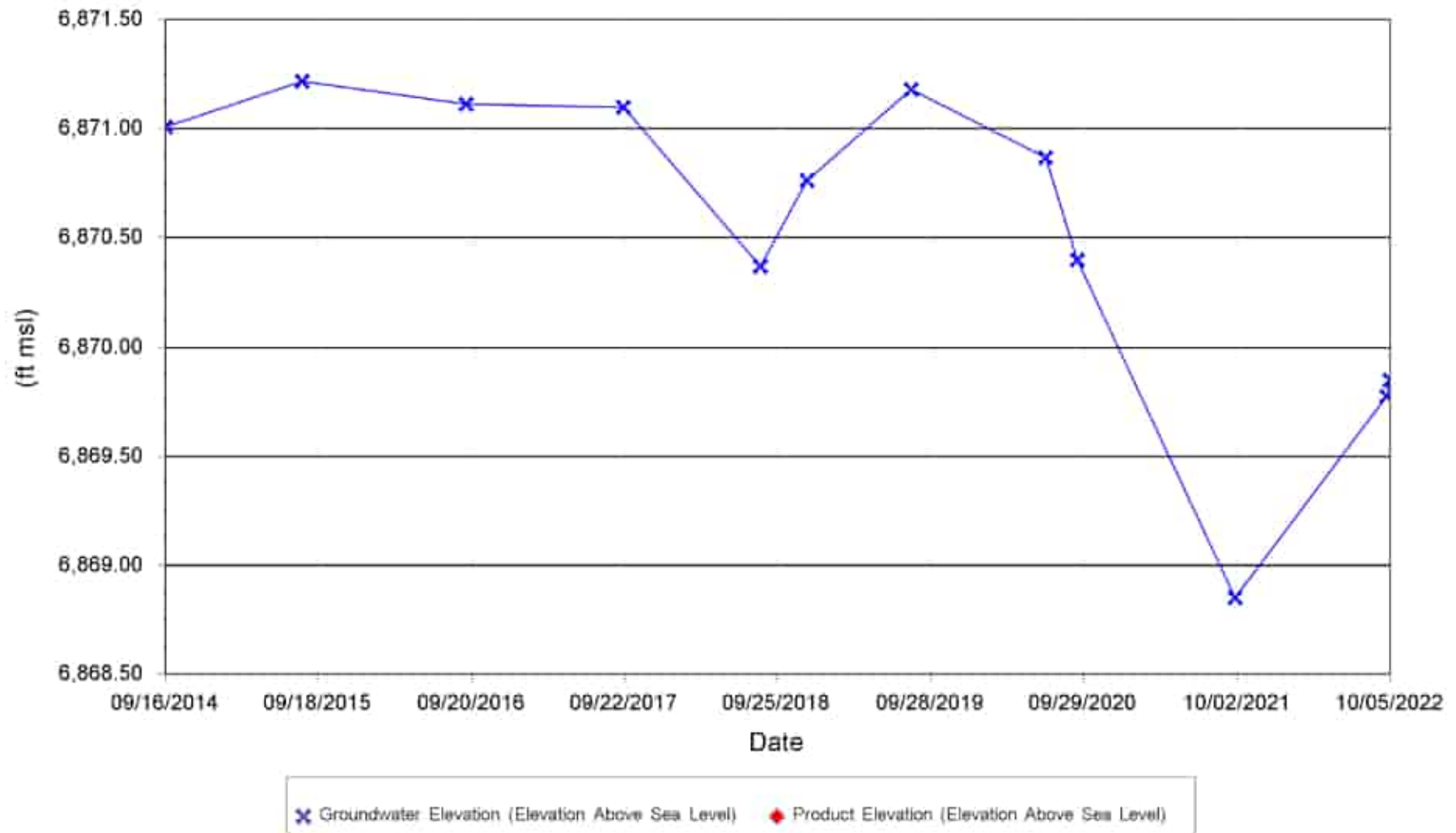
SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. BW-5C HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER**

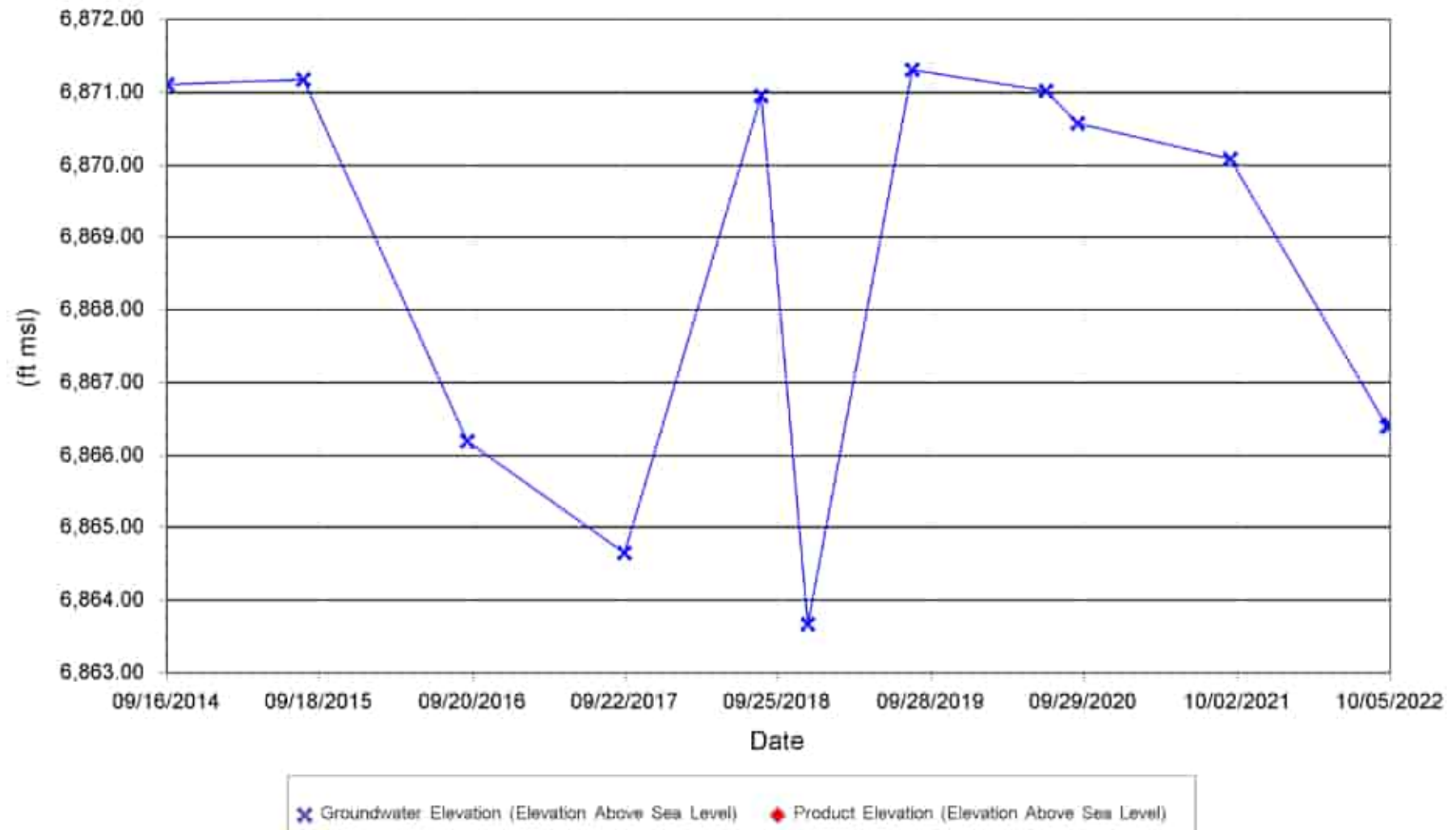
Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. MW-1 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

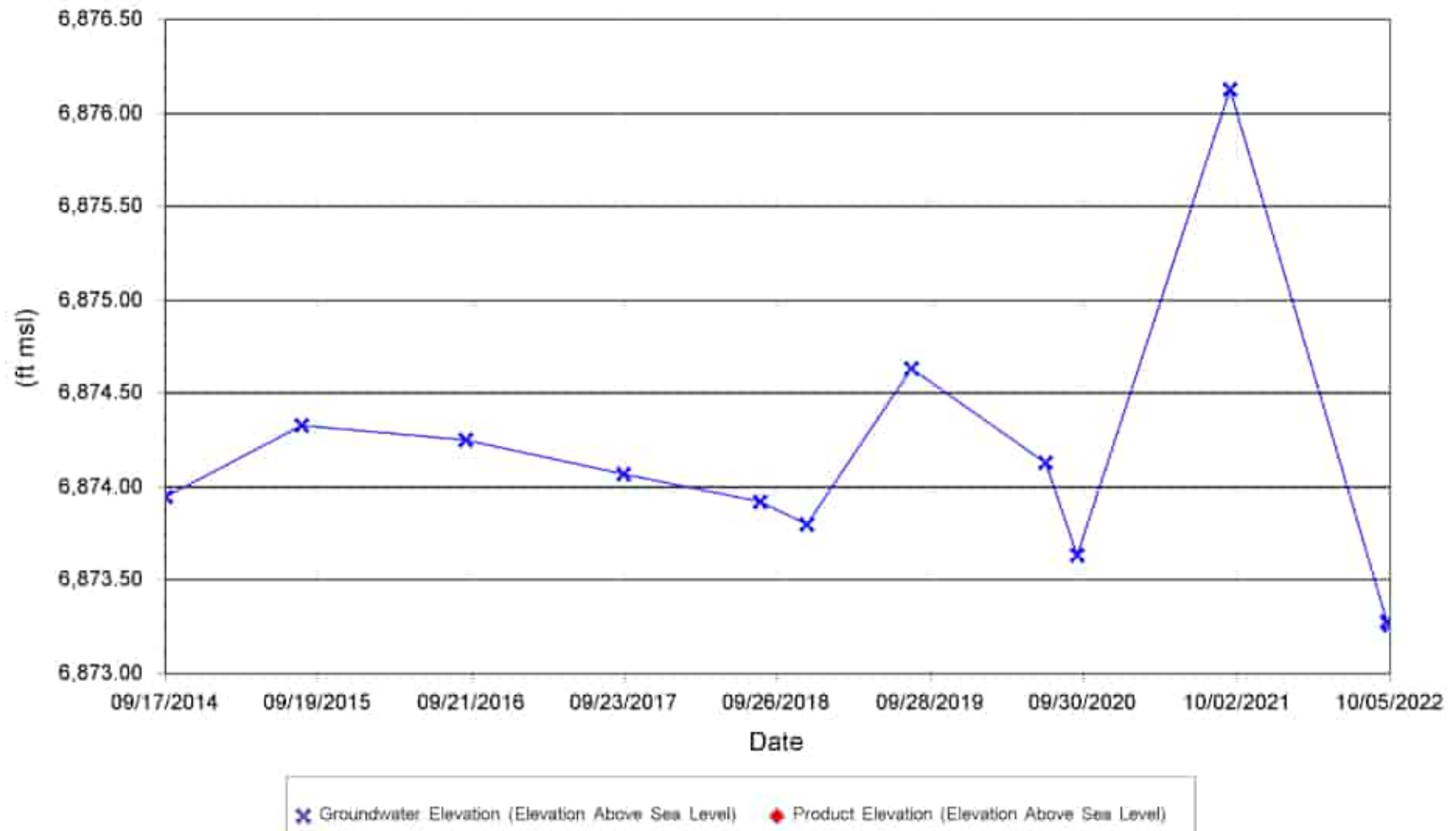
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. MW-2 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

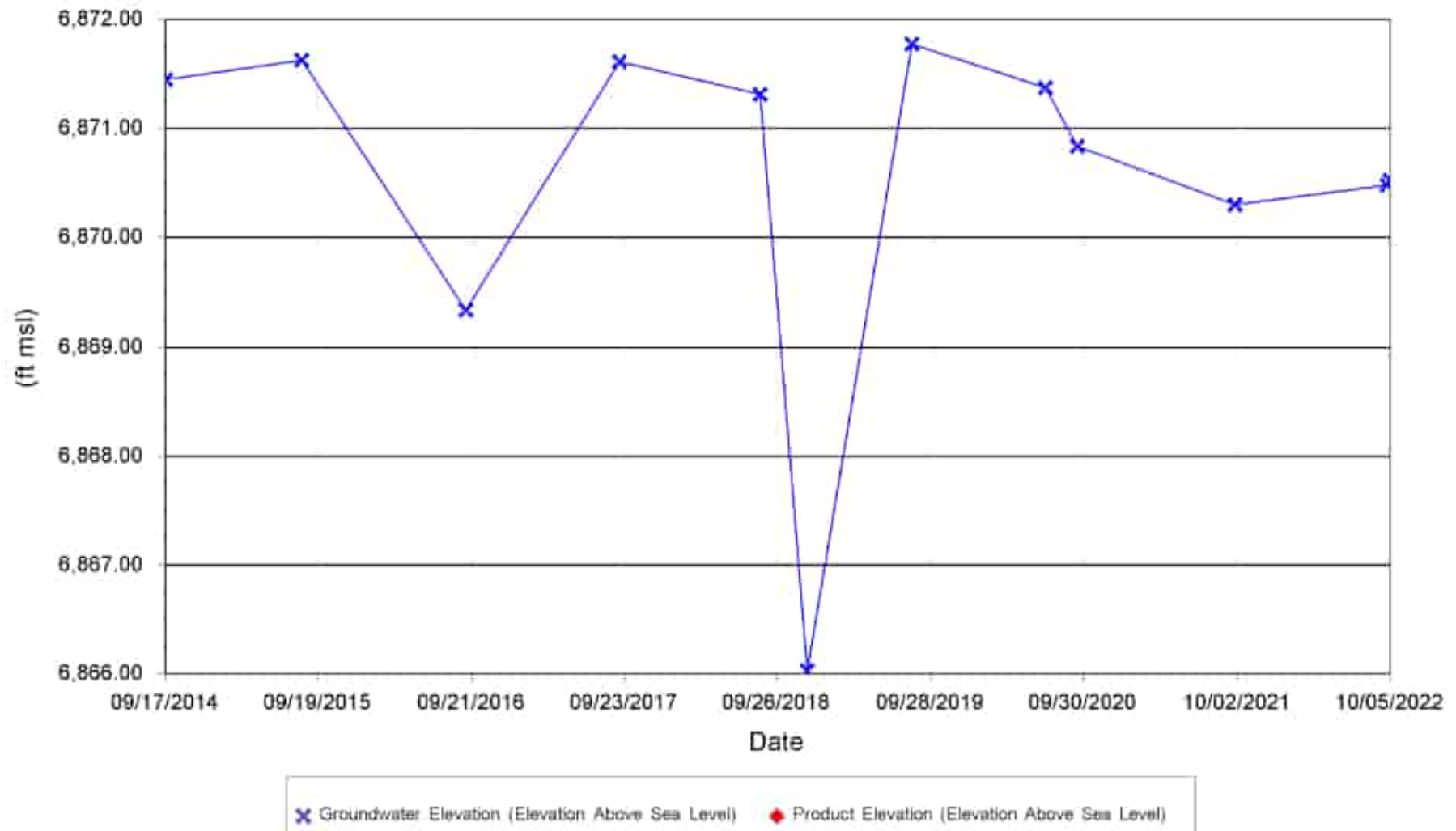
ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. MW-4 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER**

Notes:
SPH - Separate Phase Hydrocarbon
ft msl - feet above mean sea level
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

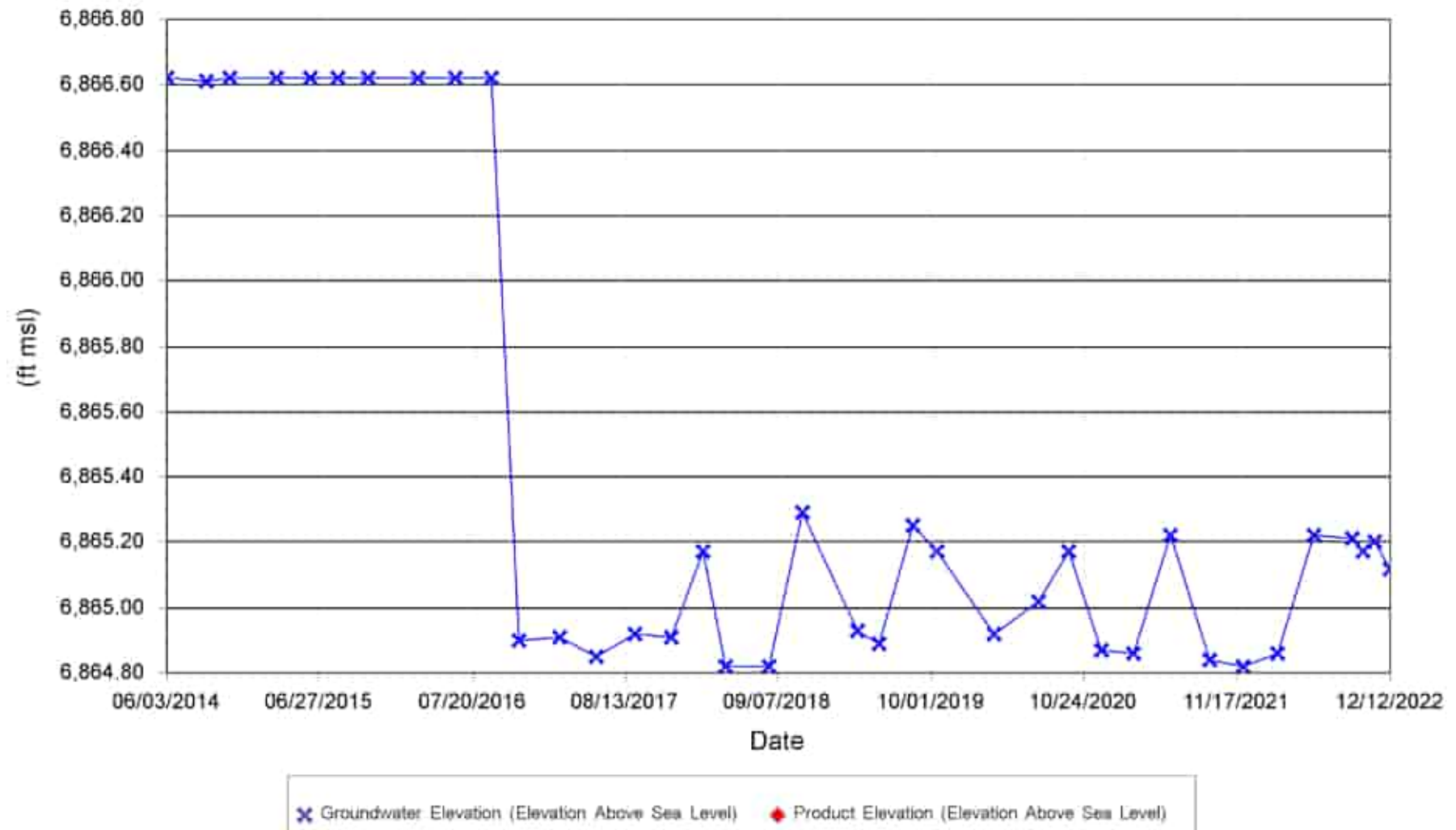
ProjectDirect: B-2C: Sonsele Hydrographs 2022 PK:8111 RK:103639

**APPENDIX B-2C. MW-5 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

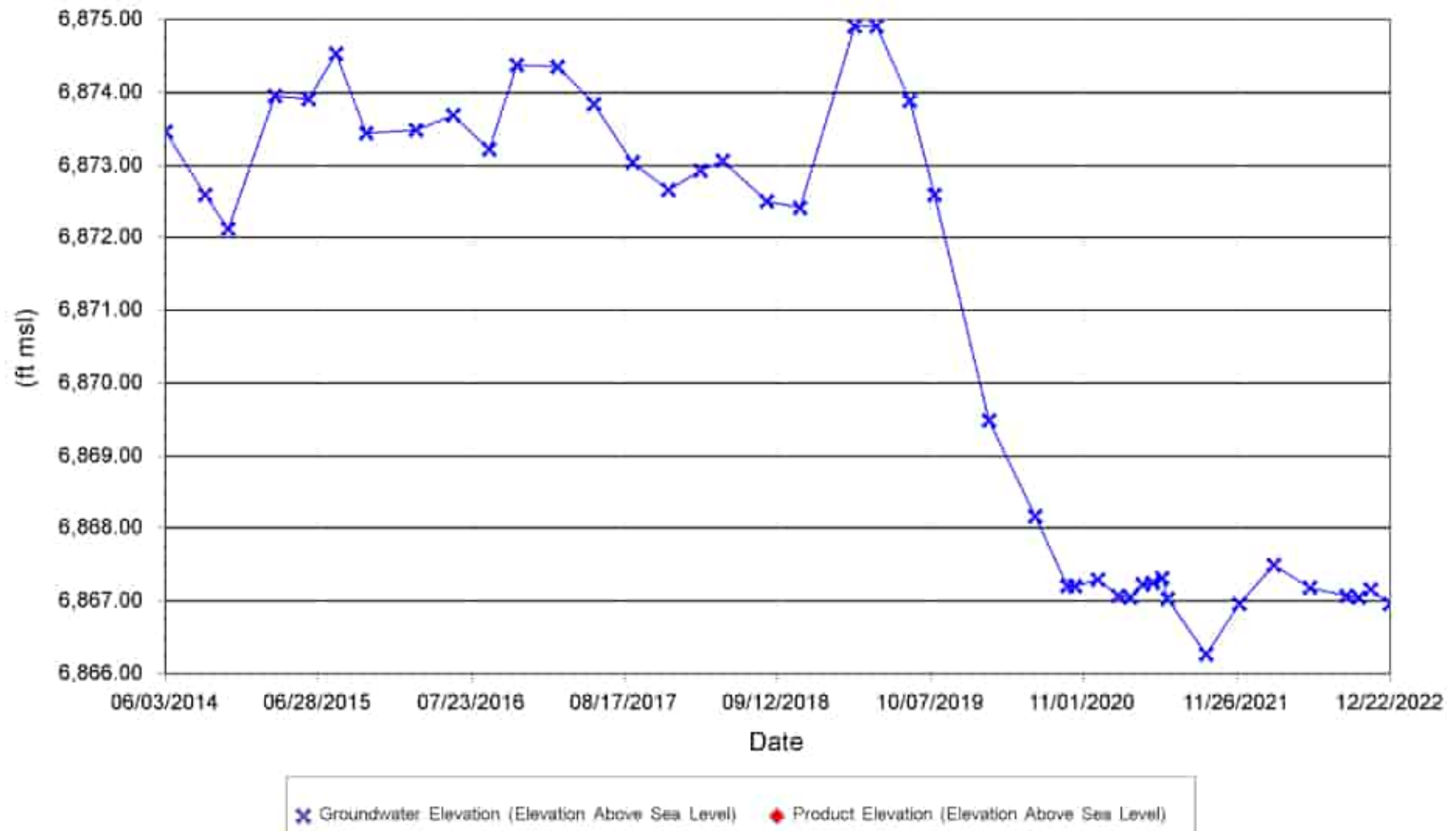
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

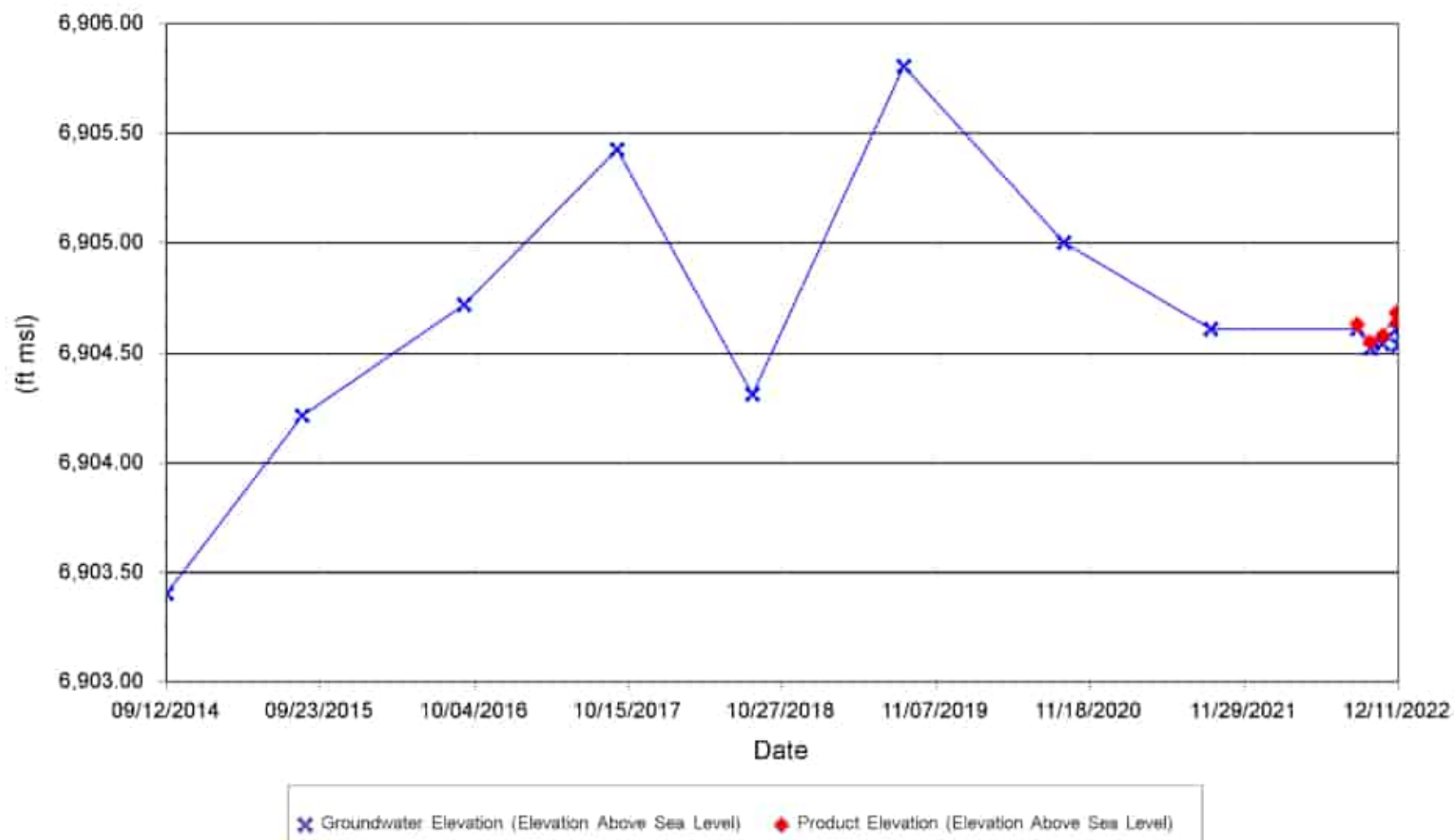
**APPENDIX B-2C. OW-01 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

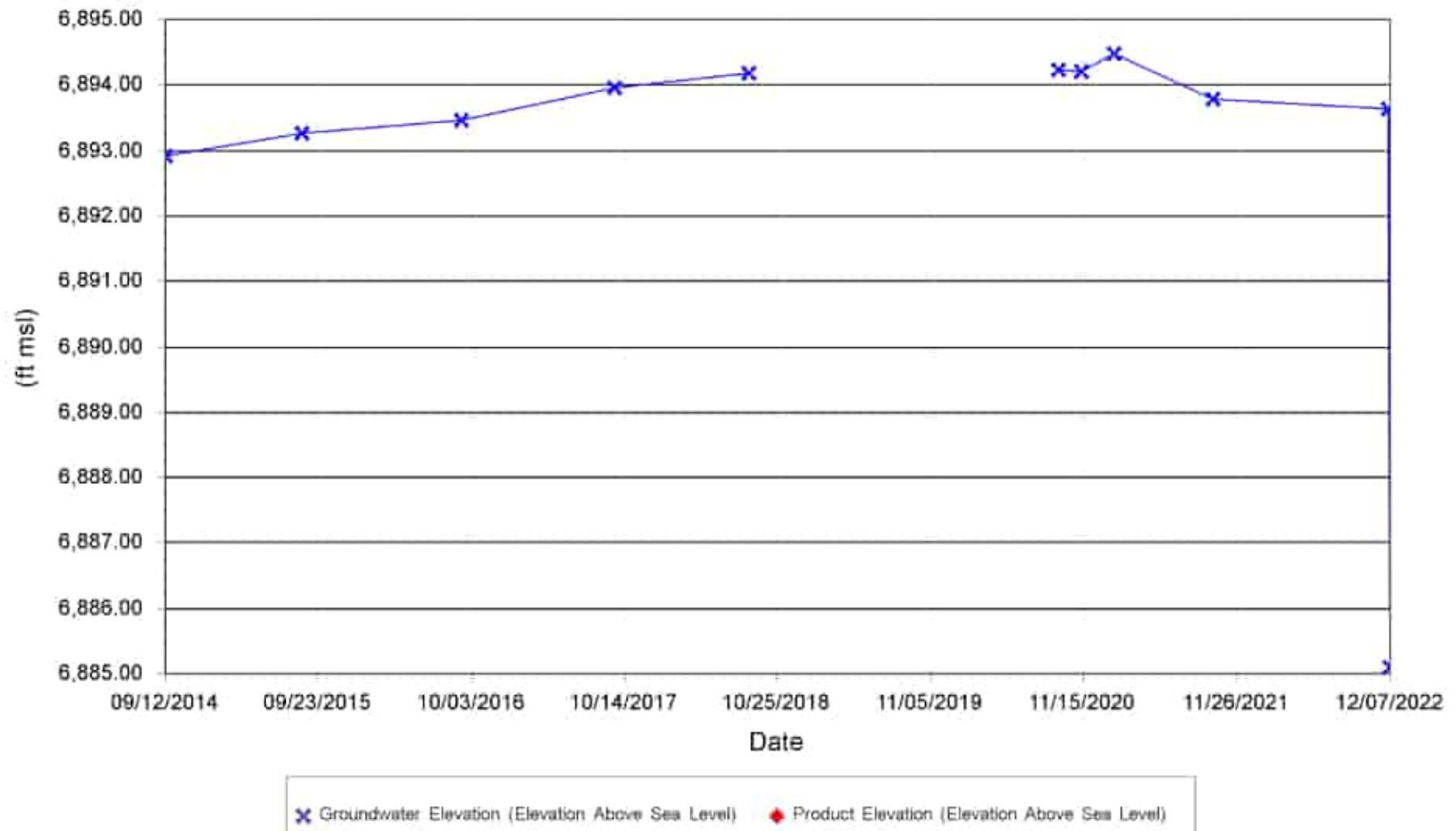
**APPENDIX B-2C. OW-10 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER**

**APPENDIX B-2C. OW-11 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

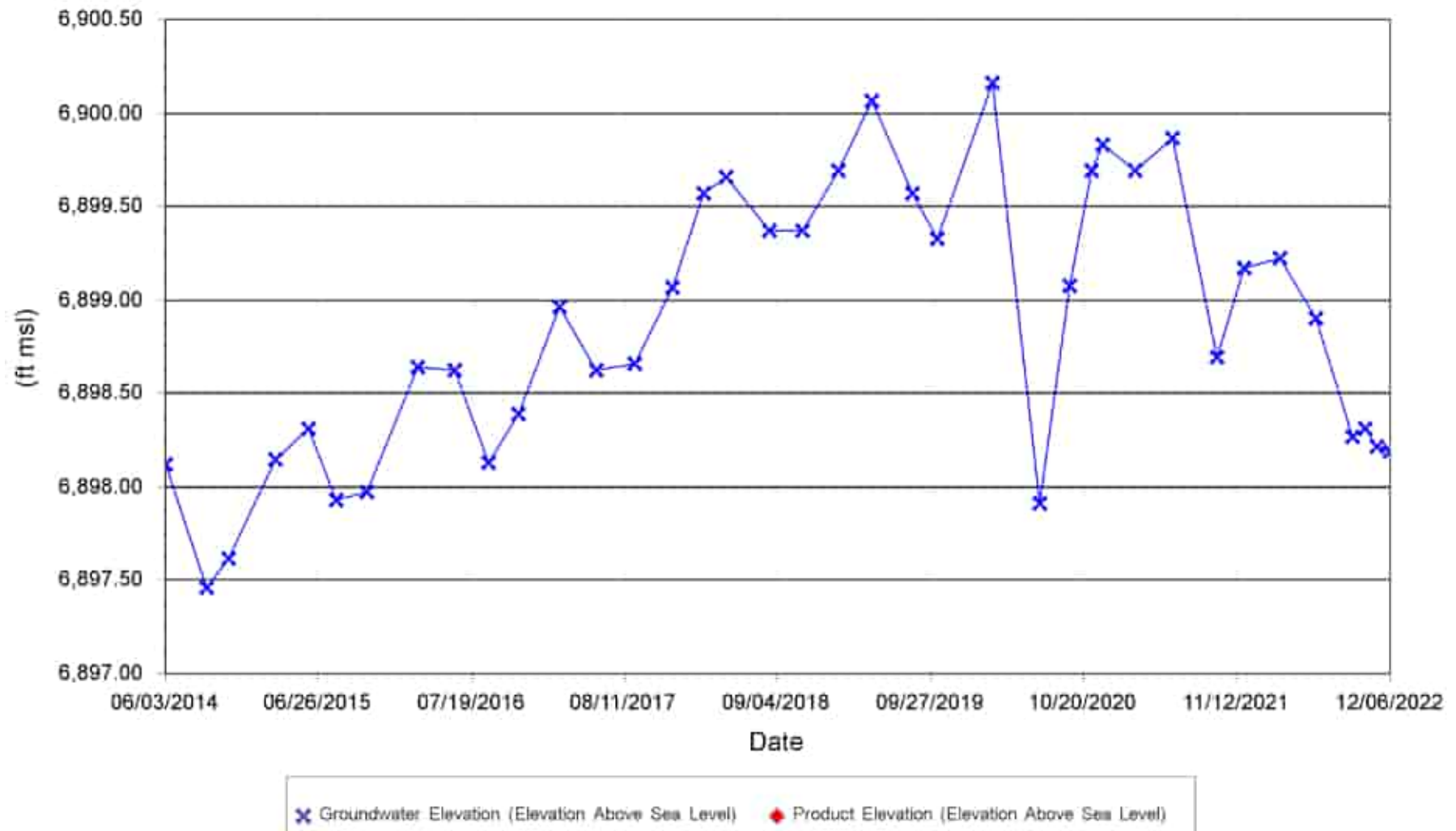
A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. OW-12 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER****Notes:**

SPH - Separate Phase Hydrocarbon

ft msl - feet above mean sea level

A graph with missing or no data points indicates that the well was dry during that(those) period(s)

**APPENDIX B-2C. OW-13 HISTORICAL GROUNDWATER ELEVATIONS AND SPH THICKNESS
SONSELA AQUIFER**



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix C – 2022 Laboratory Analytical Reports

Appendix C-1. 1st Quarter Analytical Reports

Appendix C-2. 2nd Quarter Analytical Reports

Appendix C-3. 3rd Quarter Analytical Reports

Appendix C-4. 4th Quarter Analytical Reports



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix C-1. 1st Quarter Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203A72

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/18/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 12, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203A72
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270:

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 8:35:00 AM

Lab ID: 2203A72-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 91.2 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Surr: Dibromofluoromethane | 96.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:15:30 PM | R86666 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:15:30 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.034 | 0.028 | 0.050 | J | mg/L | 1 | 3/22/2022 2:15:30 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:15:30 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 8:35:00 AM

Lab ID: 2203A72-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 10:38:12 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 8:35:00 AM

Lab ID: 2203A72-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | Analyst: SB |
| Diesel Range Organics (DRO) | 0.023 | 0.016 | 0.064 | J | mg/L | 1 | 3/28/2022 2:01:49 PM | 66372 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 2:01:49 PM | 66372 |
| Surr: DNOP | 112 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 2:01:49 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | Analyst: JME |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: 2-Fluorophenol | 45.1 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: Phenol-d5 | 36.0 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: 2,4,6-Tribromophenol | 56.1 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: Nitrobenzene-d5 | 56.8 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: 2-Fluorobiphenyl | 55.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| Surr: 4-Terphenyl-d14 | 83.4 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 2:44:11 AM | 66282 |
| EPA METHOD 8270SIM | | | | | | | | Analyst: DAM |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 7:01:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** EB 3-18-22**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/18/2022 8:35:00 AM**Lab ID:** 2203A72-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.7 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 58.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 7:01:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 101 | 0 | 72.3-147 | E | %Rec | 1 | 3/23/2022 7:01:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 8:35:00 AM

Lab ID: 2203A72-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:49:10 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 12:28:04 PM | 66341 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 12:28:04 PM | 66341 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/23/2022 12:28:04 PM | 66341 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/23/2022 12:28:04 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:38:26 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 8:35:00 AM

Lab ID: 2203A72-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| Zinc | 0.0068 | 0.0032 | 0.010 | J | mg/L | 1 | 3/21/2022 11:36:10 AM | A86607 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:56:05 PM | B86624 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 6:56:05 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 6:56:05 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 6:56:05 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:40:34 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 9:35:00 AM

Lab ID: 2203A72-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 150 | 2.3 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Toluene | 17 | 2.0 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Ethylbenzene | 44 | 2.1 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 3.9 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,2,4-Trimethylbenzene | 18 | 1.2 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,3,5-Trimethylbenzene | 14 | 1.8 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Acetone | 160 | 25 | 100 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 2-Butanone | 27 | 20 | 100 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Chloromethane | 7.0 | 4.1 | 30 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Isopropylbenzene | 8.1 | 1.8 | 10 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 4-Isopropyltoluene | 3.2 | 2.0 | 10 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| n-Butylbenzene | 3.0 | 2.5 | 30 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| n-Propylbenzene | 11 | 1.8 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| sec-Butylbenzene | 3.1 | 1.4 | 10 | J | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Xylenes, Total | 29 | 3.7 | 15 | | µg/L | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 89.6 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 97.5 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Surr: Dibromofluoromethane | 91.4 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 2:43:57 PM | R86666 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 2:43:57 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 1.3 | 0.28 | 0.50 | | mg/L | 10 | 3/22/2022 2:43:57 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 98.1 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 2:43:57 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203A72-002B

Client Sample ID: East LDU

Collection Date: 3/18/2022 9:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 10:53:13 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 9:35:00 AM

Lab ID: 2203A72-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.1 | 0.16 | 0.64 | | mg/L | 10 | 3/29/2022 3:53:02 PM | 66372 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/29/2022 3:53:02 PM | 66372 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/29/2022 3:53:02 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 2,4-Dimethylphenol | 5.7 | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 2-Methylphenol | 7.7 | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 3+4-Methylphenol | 7.1 | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Phenol | 5.9 | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: 2-Fluorophenol | 10.1 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: Phenol-d5 | 25.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 15.7 | 0 | 18.6-129 | S | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: Nitrobenzene-d5 | 49.0 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 49.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 61.5 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 10:58:02 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.48 | 10 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Naphthalene | 7.2 | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| 1-Methylnaphthalene | 5.8 | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| 2-Methylnaphthalene | 5.2 | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Acenaphthene | 16 | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Fluorene | ND | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Phenanthrene | 2.2 | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Anthracene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Fluoranthene | ND | 1.0 | 2.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Pyrene | ND | 1.6 | 2.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.36 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Chrysene | ND | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.43 | 3.0 | D | µg/L | 10 | 3/23/2022 7:45:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 9:35:00 AM

Lab ID: 2203A72-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.0 | 0 | 31.6-100 | D | %Rec | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 65.0 | 0 | 26.7-90.1 | D | %Rec | 10 | 3/23/2022 7:45:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 98.0 | 0 | 72.3-147 | D | %Rec | 10 | 3/23/2022 7:45:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 9:35:00 AM

Lab ID: 2203A72-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|---------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.17 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Beryllium | 0.0052 | 0.00088 | 0.0020 | * | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Cadmium | 0.013 | 0.0015 | 0.0020 | * | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Chromium | 7.0 | 0.021 | 0.060 | * | mg/L | 10 | 4/6/2022 1:57:35 PM | 66643 |
| Cobalt | 0.10 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Nickel | 7.3 | 0.033 | 0.10 | * | mg/L | 10 | 4/6/2022 1:57:35 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Vanadium | 0.14 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:00:21 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/23/2022 12:30:31 PM | 66341 |
| Arsenic | 0.0012 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:30:31 PM | 66341 |
| Lead | ND | 0.00031 | 0.0025 | | mg/L | 5 | 3/23/2022 12:30:31 PM | 66341 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/23/2022 12:30:31 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 3/25/2022 3:36:14 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 9:35:00 AM

Lab ID: 2203A72-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.17 | 0.0011 | 0.0020 | | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Beryllium | 0.0051 | 0.00088 | 0.0020 | * | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Cadmium | 0.031 | 0.00098 | 0.0020 | * | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Chromium | 7.7 | 0.020 | 0.060 | * | mg/L | 10 | 4/19/2022 2:46:30 PM | A87332 |
| Cobalt | 0.12 | 0.0024 | 0.0060 | | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Nickel | 8.1 | 0.033 | 0.10 | * | mg/L | 10 | 4/19/2022 2:46:30 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Vanadium | 0.16 | 0.0017 | 0.050 | | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 3/21/2022 11:47:35 AM | A86607 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 6:58:46 PM | B86624 |
| Arsenic | 0.00087 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/21/2022 6:58:46 PM | B86624 |
| Lead | 0.0014 | 0.00028 | 0.0025 | J | mg/L | 5 | 3/21/2022 6:58:46 PM | B86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 6:58:46 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/25/2022 2:44:51 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 13 | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Toluene | 0.82 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Ethylbenzene | 6.0 | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | 4.9 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,2,4-Trimethylbenzene | 0.51 | 0.12 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,3,5-Trimethylbenzene | 4.8 | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Chloromethane | 0.83 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,1-Dichloroethene | 0.53 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Isopropylbenzene | 0.94 | 0.18 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 4-Isopropyltoluene | 0.36 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| n-Propylbenzene | 0.65 | 0.18 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| sec-Butylbenzene | 0.25 | 0.14 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Trichloroethene (TCE) | 0.58 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Xylenes, Total | 0.52 | 0.37 | 1.5 | J | µg/L | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 88.2 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 96.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Surr: Dibromofluoromethane | 91.1 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:09:37 PM | R86666 |
| Surr: Toluene-d8 | 99.8 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:09:37 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.28 | 0.028 | 0.050 | | mg/L | 1 | 3/22/2022 4:09:37 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:09:37 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 11:08:12 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.0 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 2:50:42 PM | 66372 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 2:50:42 PM | 66372 |
| Surr: DNOP | 110 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 2:50:42 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: 2-Fluorophenol | 52.6 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | S | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: 2,4,6-Tribromophenol | 54.0 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: Nitrobenzene-d5 | 63.6 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: 2-Fluorobiphenyl | 59.6 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| Surr: 4-Terphenyl-d14 | 87.7 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 4:47:07 AM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 8.0 | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Naphthalene | 0.16 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Pyrene | 0.16 | 0.16 | 0.20 | J | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 2:33:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.2 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 54.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 2:33:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 82.7 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 2:33:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.066 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Cadmium | 0.0047 | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Chromium | 0.32 | 0.0021 | 0.0060 | * | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Cobalt | 0.0061 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Nickel | 0.81 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Vanadium | 0.066 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:04:34 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/23/2022 12:37:52 PM | 66341 |
| Arsenic | 0.00068 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:37:52 PM | 66341 |
| Lead | ND | 0.00031 | 0.0025 | | mg/L | 5 | 3/23/2022 12:37:52 PM | 66341 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/23/2022 12:37:52 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:46:59 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 10:00:00 AM

Lab ID: 2203A72-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.068 | 0.0011 | 0.0020 | | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Cadmium | 0.012 | 0.00098 | 0.0020 | * | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Chromium | 0.14 | 0.0020 | 0.0060 | * | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Cobalt | 0.013 | 0.0024 | 0.0060 | | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Nickel | 0.89 | 0.0033 | 0.010 | * | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Vanadium | 0.071 | 0.0017 | 0.050 | | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 3/21/2022 11:50:26 AM | A86607 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/22/2022 12:22:24 PM | A86633 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 3/22/2022 12:22:24 PM | A86633 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/22/2022 12:22:24 PM | A86633 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/22/2022 12:22:24 PM | A86633 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:49:05 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 11:00:00 AM

Lab ID: 2203A72-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Acetone | 3.4 | 2.5 | 10 | J | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Chloromethane | 0.69 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 90.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 97.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Surr: Dibromofluoromethane | 94.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 5:35:10 PM | R86666 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 5:35:10 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.044 | 0.028 | 0.050 | J | mg/L | 1 | 3/22/2022 5:35:10 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 5:35:10 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** STP-1 to EP-2**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/18/2022 11:00:00 AM**Lab ID:** 2203A72-004B**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 11:23:09 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 11:00:00 AM

Lab ID: 2203A72-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|---------------------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: SB | | | |
| Diesel Range Organics (DRO) | 0.59 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 9:39:59 PM | 66372 |
| Motor Oil Range Organics (MRO) | 0.74 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 9:39:59 PM | 66372 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 9:39:59 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: DAM | | | |
| Benzoic acid | ND | 11 | 200 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 45 | 100 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Di-n-butyl phthalate | ND | 65 | 100 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Di-n-octyl phthalate | ND | 31 | 200 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 7.0 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Diethyl phthalate | ND | 39 | 100 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Dimethyl phthalate | ND | 20 | 100 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 2,4-Dimethylphenol | ND | 9.7 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 2,4-Dinitrophenol | ND | 5.0 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 2-Methylphenol | ND | 5.1 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 3+4-Methylphenol | ND | 4.5 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Phenol | ND | 3.3 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Pyridine | ND | 100 | 100 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 4.3 | 50 | D | µg/L | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 3/23/2022 11:38:53 PM | 66282 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | ND | 0.48 | 10 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Naphthalene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Acenaphthene | ND | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Fluorene | ND | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Phenanthrene | ND | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Anthracene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Fluoranthene | ND | 1.0 | 2.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Pyrene | ND | 1.6 | 2.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.36 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Chrysene | ND | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.43 | 3.0 | D | µg/L | 10 | 3/23/2022 8:30:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** STP-1 to EP-2**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/18/2022 11:00:00 AM**Lab ID:** 2203A72-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 39.0 | 0 | 31.6-100 | D | %Rec | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 42.4 | 0 | 26.7-90.1 | D | %Rec | 10 | 3/23/2022 8:30:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 109 | 0 | 72.3-147 | D | %Rec | 10 | 3/23/2022 8:30:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 11:00:00 AM

Lab ID: 2203A72-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.020 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Cobalt | 0.0042 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| Zinc | 0.041 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:06:03 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 12:42:45 PM | 66341 |
| Arsenic | 0.0030 | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 12:42:45 PM | 66341 |
| Lead | 0.00017 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/23/2022 12:42:45 PM | 66341 |
| Selenium | 0.0014 | 0.00037 | 0.0010 | | mg/L | 1 | 3/23/2022 12:42:45 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:51:15 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 11:00:00 AM

Lab ID: 2203A72-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.020 | 0.0011 | 0.0020 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Cobalt | 0.0028 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Silver | 0.0014 | 0.0013 | 0.0050 | J | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| Zinc | 0.029 | 0.0032 | 0.010 | | mg/L | 1 | 3/21/2022 11:53:15 AM | A86607 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 7:04:09 PM | B86624 |
| Arsenic | 0.0028 | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 7:04:09 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 7:04:09 PM | B86624 |
| Selenium | 0.00084 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/21/2022 7:04:09 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:53:25 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203A72-004F

Client Sample ID: STP-1 to EP-2

Collection Date: 3/18/2022 11:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------------|--------|-------|-------|------|---------|----|----------------------|----------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: AKS | |
| E. Coli | 19863 | 10.00 | 10.00 | | MPN/100 | 10 | 3/19/2022 5:10:00 PM | 66276 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** STP-1 to EP-2**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/18/2022 11:00:00 AM**Lab ID:** 2203A72-004G**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | <37.88 | 2.0 | 2.0 | H | mg/L | 1 | 3/23/2022 4:44:00 PM | 66272 |

NOTES:

E-Estimated Value due to all bottles having depleted <2.0 mg/L

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022 11:00:00 AM

Lab ID: 2203A72-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 88.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 97.9 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Surr: Dibromofluoromethane | 92.6 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:03:46 PM | R86666 |
| Surr: Toluene-d8 | 98.2 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:03:46 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.032 | 0.028 | 0.050 | J | mg/L | 1 | 3/22/2022 6:03:46 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:03:46 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 12 | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Toluene | 0.70 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Ethylbenzene | 5.8 | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | 4.8 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,2,4-Trimethylbenzene | 0.46 | 0.12 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,3,5-Trimethylbenzene | 4.7 | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Chloromethane | 0.85 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Isopropylbenzene | 0.90 | 0.18 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 4-Isopropyltoluene | 0.36 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| n-Propylbenzene | 0.59 | 0.18 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| sec-Butylbenzene | 0.22 | 0.14 | 1.0 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Xylenes, Total | 0.51 | 0.37 | 1.5 | J | µg/L | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 91.1 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 98.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Surr: Dibromofluoromethane | 90.8 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:32:20 PM | R86666 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:32:20 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.27 | 0.028 | 0.050 | | mg/L | 1 | 3/22/2022 6:32:20 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 6:32:20 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 11:38:09 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.4 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 3:14:51 PM | 66372 |
| Motor Oil Range Organics (MRO) | 0.12 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 3:14:51 PM | 66372 |
| Surr: DNOP | 159 | 0 | 42.2-138 | S | %Rec | 1 | 3/28/2022 3:14:51 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: 2-Fluorophenol | 48.5 | 0 | 29.4-87.7 | | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: 2,4,6-Tribromophenol | 64.5 | 0 | 18.6-129 | | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: Nitrobenzene-d5 | 62.7 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: 2-Fluorobiphenyl | 54.6 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| Surr: 4-Terphenyl-d14 | 75.1 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 12:19:33 AM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.48 | 10 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Naphthalene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Acenaphthene | ND | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Fluorene | ND | 0.31 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Phenanthrene | ND | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Anthracene | ND | 0.34 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Fluoranthene | ND | 1.0 | 2.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Pyrene | ND | 1.6 | 2.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.36 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Chrysene | ND | 0.24 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.57 | 1.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.43 | 3.0 | D | µg/L | 10 | 3/23/2022 10:10:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.8 | 0 | 31.6-100 | D | %Rec | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 60.0 | 0 | 26.7-90.1 | D | %Rec | 10 | 3/23/2022 10:10:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 97.8 | 0 | 72.3-147 | D | %Rec | 10 | 3/23/2022 10:10:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.068 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Cadmium | 0.0055 | 0.0015 | 0.0020 | * | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Chromium | 0.32 | 0.0021 | 0.0060 | * | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Cobalt | 0.0069 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Nickel | 0.83 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Vanadium | 0.067 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:16:08 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/23/2022 12:45:12 PM | 66341 |
| Arsenic | 0.00064 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:45:12 PM | 66341 |
| Lead | ND | 0.00031 | 0.0025 | | mg/L | 5 | 3/23/2022 12:45:12 PM | 66341 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/23/2022 12:45:12 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 2:55:33 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-18-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/18/2022

Lab ID: 2203A72-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.069 | 0.0011 | 0.0020 | | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Beryllium | 0.00090 | 0.00088 | 0.0020 | J | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Cadmium | 0.013 | 0.00098 | 0.0020 | * | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Chromium | 0.14 | 0.0020 | 0.0060 | * | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Cobalt | 0.014 | 0.0024 | 0.0060 | | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Nickel | 0.88 | 0.0033 | 0.010 | * | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Vanadium | 0.069 | 0.0017 | 0.050 | | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/21/2022 11:56:38 AM | A86607 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 7:06:51 PM | B86624 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 3/21/2022 7:06:51 PM | B86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 7:06:51 PM | B86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 7:06:51 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:01:57 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203A72-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 85.0 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Surr: Dibromofluoromethane | 90.6 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 7:00:51 PM | R86666 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 7:00:51 PM | R86666 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.035 | 0.028 | 0.050 | J | mg/L | 1 | 3/22/2022 7:00:51 PM | G86666 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 7:00:51 PM | G86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203A72

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203A72-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 11:53:03 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



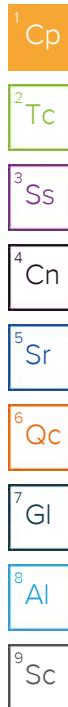
ANALYTICAL REPORT

March 30, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1473974
Samples Received: 03/22/2022
Project Number:
Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---|----|-----------------|
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| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
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2203A72-001F EB 3-18-22 L1473974-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836405 | 1 | 03/23/22 09:33 | 03/24/22 11:40 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2203A72-002F EAST LDU L1473974-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836405 | 1 | 03/23/22 09:33 | 03/24/22 11:41 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203A72-003F WEST LDU L1473974-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836405 | 1 | 03/23/22 09:33 | 03/24/22 11:42 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203A72-004HI STP-1 TO EP-2 L1473974-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 410.4 | WG1836817 | 1 | 03/23/22 13:40 | 03/23/22 13:59 | PSN | Mt. Juliet, TN |
| Wet Chemistry by Method 4500CN E-2016 | WG1836405 | 1 | 03/23/22 09:33 | 03/24/22 11:45 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203A72-006F DUP 3-18-22 L1473974-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:47 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/24/2022 11:40 | WG1836405 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 03/18/22 09:35

L1473974

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/24/2022 11:41 | WG1836405 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/18/22 10:00

L1473974

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/24/2022 11:42 | WG1836405 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 03/18/22 11:00

L1473974

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 194 | | 20.0 | 1 | 03/23/2022 13:59 | WG1836817 |

¹ Cp² Tc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/24/2022 11:45 | WG1836405 |

³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/30/2022 12:47 | WG1836836 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3773147-1 03/23/22 13:55

| Analyte | MB Result
mg/l | <u>MB Qualifier</u> | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|---------------------|----------------|----------------|
| COD | U | | 11.7 | 20.0 |

L1468932-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1468932-01 03/23/22 13:56 • (DUP) R3773147-3 03/23/22 13:56

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | <u>DUP Qualifier</u> | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|----------------------|------------------------|
| COD | 154 | 148 | 1 | 4.29 | | 20 |

L1473995-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1473995-07 03/23/22 14:01 • (DUP) R3773147-6 03/23/22 14:01

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | <u>DUP Qualifier</u> | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|----------------------|------------------------|
| COD | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3773147-2 03/23/22 13:56

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | <u>LCS Qualifier</u> |
|---------|----------------------|--------------------|---------------|------------------|----------------------|
| COD | 500 | 511 | 102 | 90.0-110 | |

L1473995-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473995-02 03/23/22 13:59 • (MS) R3773147-4 03/23/22 14:00 • (MSD) R3773147-5 03/23/22 14:00

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| COD | 500 | 66.2 | 525 | 527 | 91.8 | 92.1 | 1 | 80.0-120 | | | 0.304 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3773518-1 03/24/22 11:08

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1473729-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1473729-03 03/24/22 11:16 • (DUP) R3773518-3 03/24/22 11:17

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | 0.0964 | 0.0945 | 1 | 1.99 | 20 |

L1473729-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1473729-04 03/24/22 11:20 • (DUP) R3773518-4 03/24/22 11:21

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | 0.0677 | 0.0653 | 1 | 3.61 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3773518-2 03/24/22 11:09

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.102 | 102 | 87.1-120 | |

L1473729-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473729-06 03/24/22 11:23 • (MS) R3773518-5 03/24/22 11:24 • (MSD) R3773518-6 03/24/22 11:25

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0920 | 0.0985 | 92.0 | 98.5 | 1 | 90.0-110 | | | 6.82 | 20 |

L1473964-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473964-01 03/24/22 11:28 • (MS) R3773518-7 03/24/22 11:29 • (MSD) R3773518-8 03/24/22 11:32

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.103 | 0.102 | 99.9 | 98.9 | 1 | 90.0-110 | | | 0.976 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3775665-1 03/30/22 12:43

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1473974-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1473974-05 03/30/22 12:47 • (DUP) R3775665-3 03/30/22 12:48

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1473975-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1473975-04 03/30/22 12:56 • (DUP) R3775665-6 03/30/22 12:57

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 73.6 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3775665-2 03/30/22 12:44

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1473975-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473975-02 03/30/22 12:50 • (MS) R3775665-4 03/30/22 12:51 • (MSD) R3775665-5 03/30/22 12:52

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.103 | 0.104 | 98.5 | 99.5 | 1 | 90.0-110 | | | 0.966 | 20 |

L1473975-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473975-06 03/30/22 12:59 • (MS) R3775665-7 03/30/22 13:00 • (MSD) R3775665-8 03/30/22 13:01

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0893 | 0.0823 | 86.2 | 79.2 | 1 | 90.0-110 | J6 | J6 | 8.16 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |



Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

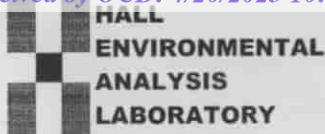
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

E165

| | | | | | | | |
|--|--|------------------|--|-----------------------|--|---------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|--------------------------------|---------|-----------------------|--------------|--------------------------------|
| 1 | 2203A72-001F | EB 3-18-22 | 500AMBBDP
E-NAOH | Groundw | 3/18/2022 8:35:00 AM | 1 | Total Cyanide RCW 712 -01 |
| 2 | 2203A72-002F | East LDU | 500AMBBDP
E-NAOH | Groundw | 3/18/2022 9:35:00 AM | 1 | Total Cyanide -02 |
| 3 | 2203A72-003F | West LDU | 500AMBBDP
E-NAOH | Groundw | 3/18/2022 10:00:00 AM | 1 | Total Cyanide -03 |
| 4 | 2203A72-004H | STP-1 to EP-2 | *125 HDPE
500HDBPEH2
SO4 | Groundw | 3/18/2022 11:00:00 AM | 1 | COD L2 -04 3-04 |
| 5 | 2203A72-004I | STP-1 to EP-2 | 500AMBBDP
E-NAOH | Groundw | 3/18/2022 11:00:00 AM | 1 | Total Cyanide RCW 712 -05 3-04 |
| 6 | 2203A72-006F | DUP 3-18-22 | 500AMBBDP
E-NAOH | Groundw | 3/18/2022 | 1 | Total Cyanide -06 -05 |

L1473974

3/18/22

3/22

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☒ N If Applicable

COC Signed/Accurate: ☒ Y ☒ N VOA Zero Headspace: ☒ Y ☒ N

Bottles arrive intact: ☒ Y ☒ N Pres. Correct Check: ☒ Y ☒ N

Correct bottles used: ☒ Y ☒ N

Sufficient volume sent: ☒ Y ☒ N

RAD Screen <0.5 mR/hr: ☒ Y ☒ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | |
|------------------|-----------------|---------------|--------------|---------------|------------|
| Relinquished By: | Date: 3/18/2022 | Time: 2:15 PM | Received By: | Date: 3/18/22 | Time: 0900 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

| | |
|--|---|
| REPORT TRANSMITTAL DESIRED: | |
| ☐ HARDCOPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| FOR LAB USE ONLY | |
| Temp of samples 2.3 BAA7 | Attempt to Cool ? |
| Comments: | |

TAT:

Standard ☒

RUSH

Next BD ☐2nd BD ☐3rd BD ☐

TRK# 5528 5947 9466

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057238 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057240 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0030 | 0.002000 | 0 | 110 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 109 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.4 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 98.6 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 113 | 50 | 150 | | | |
| Nickel | 0.0056 | 0.010 | 0.005000 | 0 | 112 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 104 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 114 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057242 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: MB-66643 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075587 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-66643 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075588 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.8 | 50 | 150 | | | J |
| Chromium | 0.0056 | 0.0060 | 0.006000 | 0 | 92.5 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 69.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.5 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 99.8 | 50 | 150 | | | J |

| Sample ID: LCS-66643 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075589 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.4 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088697 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088702 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.7 | 50 | 150 | | | J |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088704 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057239 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057241 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 109 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.4 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 98.6 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 113 | 50 | 150 | | | |
| Nickel | 0.0056 | 0.010 | 0.005000 | 0 | 112 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 104 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 114 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057243 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: 2203A72-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB 3-18-22 | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057272 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Nickel | 0.52 | 0.010 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0.006803 | 105 | 70 | 130 | | | |

| Sample ID: 2203A72-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB 3-18-22 | Batch ID: A86607 | RunNo: 86607 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3057273 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 70 | 130 | 4.43 | 20 | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 70 | 130 | 3.74 | 20 | |
| Cadmium | 0.56 | 0.0020 | 0.5000 | 0 | 112 | 70 | 130 | 5.86 | 20 | |
| Chromium | 0.55 | 0.0060 | 0.5000 | 0 | 109 | 70 | 130 | 4.75 | 20 | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0 | 109 | 70 | 130 | 5.80 | 20 | |
| Nickel | 0.55 | 0.010 | 0.5000 | 0 | 111 | 70 | 130 | 5.87 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 110 | 70 | 130 | 5.45 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 108 | 70 | 130 | 5.51 | 20 | |
| Zinc | 0.57 | 0.010 | 0.5000 | 0.006803 | 113 | 70 | 130 | 6.47 | 20 | |

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088745 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |

| Sample ID: LLLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088746 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.7 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A72

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088747 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058718 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058719 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058720 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| Sample ID: MB-66341 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66341 | RunNo: 86680 | | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | SeqNo: 3060282 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: MSLCS-66341 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66341 | RunNo: 86680 | | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | SeqNo: 3060284 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MSLCS-66341 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66341 | | RunNo: 86680 | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | | SeqNo: 3060284 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

| Sample ID: MSLLCS-66341 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
|--------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66341 | | RunNo: 86680 | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | | SeqNo: 3060285 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00088 | 0.0010 | 0.001000 | 0 | 88.4 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.00078 | 0.0010 | 0.001000 | 0 | 77.9 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058031 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058032 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058033 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 85 | 115 | | | |
| Lead | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| Sample ID: 2203A72-004EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: STP-1 to EP-2 | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058093 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | | | |
| Arsenic | 0.033 | 0.0010 | 0.02500 | 0.002757 | 119 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 89.0 | 70 | 130 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0.0008429 | 108 | 70 | 130 | | | |

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058721 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058721 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058722 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058723 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66396 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66396 | RunNo: 86753 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063465 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00014 | 0.00020 | | | | | | | | J |

| Sample ID: LCS-66396 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66396 | RunNo: 86753 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063467 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0051 | 0.00020 | 0.005000 | 0 | 103 | 85 | 115 | | | |

| Sample ID: LCSLL-66396 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
|-------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66396 | RunNo: 86753 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063514 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00018 | 0.00020 | 0.0001500 | 0 | 122 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66262 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66262 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057942 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| Sample ID: MB-66262 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66262 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057944 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| Sample ID: LCS-66262 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66262 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057950 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 102 | 70 | 130 | | | |

| Sample ID: LCSD-66262 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66262 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057952 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.099 | 0.010 | 0.1000 | 0 | 98.6 | 70 | 130 | 3.56 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: MB-66372 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065857 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.041 | | 0.03750 | | 108 | 42.2 | 138 | | | |

| Sample ID: LCS-66372 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065858 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 65.1 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.021 | | 0.01875 | | 114 | 42.2 | 138 | | | |

| Sample ID: LCSD-66372 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065859 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | 0.1875 | 0 | 55.2 | 31.7 | 75.4 | 16.4 | 20 | |
| Surr: DNOP | 0.019 | | 0.01875 | | 101 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059842 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 91.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | | | |

| Sample ID: 2203a72-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: East LDU | Batch ID: R86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059859 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 340 | 10 | 200.0 | 145.6 | 95.6 | 70 | 130 | | | |
| Toluene | 230 | 10 | 200.0 | 16.65 | 108 | 70 | 130 | | | |
| Chlorobenzene | 210 | 10 | 200.0 | 0 | 107 | 70 | 130 | | | |
| 1,1-Dichloroethene | 180 | 10 | 200.0 | 0 | 88.7 | 70 | 130 | | | |
| Trichloroethene (TCE) | 170 | 10 | 200.0 | 0 | 82.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 93 | | 100.0 | | 93.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 99 | | 100.0 | | 98.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 95 | | 100.0 | | 94.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 100 | | 100.0 | | 102 | 70 | 130 | | | |

| Sample ID: 2203a72-002amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: East LDU | Batch ID: R86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059860 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 300 | 10 | 200.0 | 145.6 | 77.1 | 70 | 130 | 11.7 | 20 | |
| Toluene | 200 | 10 | 200.0 | 16.65 | 93.5 | 70 | 130 | 12.9 | 20 | |
| Chlorobenzene | 190 | 10 | 200.0 | 0 | 97.1 | 70 | 130 | 9.45 | 20 | |
| 1,1-Dichloroethene | 160 | 10 | 200.0 | 0 | 79.1 | 70 | 130 | 11.5 | 20 | |
| Trichloroethene (TCE) | 140 | 10 | 200.0 | 0 | 71.4 | 70 | 130 | 14.7 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 93 | | 100.0 | | 93.1 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 99 | | 100.0 | | 98.6 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 90 | | 100.0 | | 90.1 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 99 | | 100.0 | | 99.3 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: R86666 | | RunNo: 86666 | | | | | | |
| Prep Date: | | Analysis Date: 3/22/2022 | | SeqNo: 3059870 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 92.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: lcs-66282 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66282 | | | RunNo: 86693 | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/23/2022 | | | SeqNo: 3061248 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 51.8 | 15 | 87.6 | | | |
| Phenol | 75 | 5.0 | 200.0 | 0 | 37.4 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.1 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 74 | | 200.0 | | 37.0 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 65.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 81 | | 100.0 | | 81.0 | 48 | 155 | | | |

| Sample ID: lcsd-66282 | SampType: LCS D | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66282 | | | RunNo: 86693 | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/23/2022 | | | SeqNo: 3061249 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 58 | 5.0 | 100.0 | 0 | 58.3 | 15 | 87.6 | 11.8 | 30.4 | |
| Phenol | 79 | 5.0 | 200.0 | 0 | 39.4 | 16.8 | 70.5 | 5.11 | 37.2 | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 52.0 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 79 | | 200.0 | | 39.4 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 67.5 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 64.7 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 60.6 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 100.0 | | 96.5 | 48 | 155 | 0 | 0 | |

| Sample ID: mb-66282 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66282 | | | RunNo: 86737 | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/24/2022 | | | SeqNo: 3062562 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: mb-66282 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66282 | RunNo: 86737 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/24/2022 | SeqNo: 3062562 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 86 | | 200.0 | | 42.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 34.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 51.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 49.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 47 | | 100.0 | | 46.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 79.7 | 48 | 155 | | | |

| Sample ID: lcs-66355 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66355 | RunNo: 86930 | | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/1/2022 | SeqNo: 3071399 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 53 | 5.0 | 100.0 | 0 | 52.9 | 15 | 87.6 | | | |
| Phenol | 82 | 5.0 | 200.0 | 0 | 41.1 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 52.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 82 | | 200.0 | | 41.1 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 57.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.2 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 60.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 88.5 | 48 | 155 | | | |

| Sample ID: lcsd-66355 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|------------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66355 | RunNo: 86930 | | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/1/2022 | SeqNo: 3071400 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 47.5 | 15 | 87.6 | 10.8 | 30.4 | |
| Phenol | 66 | 5.0 | 200.0 | 0 | 33.1 | 16.8 | 70.5 | 21.7 | 37.2 | |
| Surr: 2-Fluorophenol | 81 | | 200.0 | | 40.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 67 | | 200.0 | | 33.7 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.1 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 55 | | 100.0 | | 55.4 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 50.0 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 90 | | 100.0 | | 89.7 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: mb-66355 | | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: 66355 | | RunNo: 87124 | | | | | | |
| Prep Date: 3/23/2022 | | Analysis Date: 4/7/2022 | | SeqNo: 3080303 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 71 | | 200.0 | | 35.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 100 | | 200.0 | | 50.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 46 | | 200.0 | | 23.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 62.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 89.2 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66282 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061263 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 61.1 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 85 | | 200.0 | | 42.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 57.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.4 | 72.3 | 147 | | | |

| Sample ID: lcs-66282-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061264 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.10 | 2.000 | 0 | 36.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 54.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 62.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 87.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 84.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.10 | 2.000 | 0 | 101 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 114 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.2 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: Ics-66282-If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061264 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.0 | 72.3 | 147 | | | |

| Sample ID: Icsd-66282-If | SampType: LCSD | TestCode: EPA Method 8270SIM | | | | | | | | |
|---------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: LCSS02 | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061265 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 2.82 | 30.1 | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 21.3 | 79.9 | 1.87 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | 0 | 25 | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 61.0 | 29.8 | 82.7 | 1.63 | 27.8 | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 76.0 | 41.1 | 95.6 | 2.67 | 25.6 | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 90.0 | 52.9 | 123 | 3.39 | 22.8 | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 84.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.1 | 0.10 | 2.000 | 0 | 103 | 51 | 147 | 1.96 | 24.1 | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 88.0 | 55.3 | 115 | 1.13 | 20 | |
| Benzo(b)fluoranthene | 2.0 | 0.10 | 2.000 | 0 | 98.0 | 44.4 | 136 | 3.11 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 113 | 31.4 | 165 | 0.881 | 21.1 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.5 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.6 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.6 | 72.3 | 147 | 0 | 0 | |

| Sample ID: mb-66355 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86800 | RunNo: 86800 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3065215 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: mb-66355 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86800 | RunNo: 86800 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3065215 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 27 | | 200.0 | | 13.7 | 22 | 101 | | | S |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 52.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 101 | 72.3 | 147 | | | E |

| Sample ID: lcs-66355-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86800 | RunNo: 86800 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3065216 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.10 | 2.000 | 0 | 31.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.98 | 0.10 | 2.000 | 0 | 49.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.96 | 0.10 | 2.000 | 0 | 48.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 67.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 71.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 52.9 | 123 | | | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 81.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.8 | 0.10 | 2.000 | 0 | 92.0 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.10 | 2.000 | 0 | 90.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 60.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 84 | | 200.0 | | 42.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 100.0 | | 59.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 91.8 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon**Project:** 2022 GW Sampling 1st Qtr

| Sample ID: lcsd-66355-lf | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | | Batch ID: R86800 | | RunNo: 86800 | | | | | | |
| Prep Date: | | Analysis Date: 3/28/2022 | | SeqNo: 3065217 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 12.1 | 30.1 | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 21.3 | 79.9 | 15.1 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 22.2 | 80.3 | 15.4 | 25 | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 55.0 | 20.6 | 80.1 | 15.7 | 25 | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 63.0 | 29.8 | 82.7 | 10.0 | 27.8 | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 65.0 | 33.3 | 86 | 8.00 | 26.4 | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 69.0 | 38.2 | 93.9 | 2.94 | 27.9 | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 41.1 | 95.6 | 1.40 | 25.6 | |
| Fluoranthene | 1.6 | 0.20 | 2.000 | 0 | 79.0 | 52.9 | 123 | 4.94 | 22.8 | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 82.0 | 51 | 113 | 1.23 | 20 | |
| Benz(a)anthracene | 1.8 | 0.10 | 2.000 | 0 | 90.0 | 51 | 147 | 2.20 | 24.1 | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 55.3 | 115 | 1.16 | 20 | |
| Benzo(b)fluoranthene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 44.4 | 136 | 3.39 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 100 | 31.4 | 165 | 5.13 | 21.1 | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.8 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 84 | | 200.0 | | 42.0 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.2 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 95.0 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A72

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66272 | SampType: MBLK | TestCode: SM5210B: BOD |
| Client ID: PBW | Batch ID: 66272 | RunNo: 86704 |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061424 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | ND | 2.0 H |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66272 | SampType: LCS | TestCode: SM5210B: BOD |
| Client ID: LCSW | Batch ID: 66272 | RunNo: 86704 |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061425 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | 169 | 2.0 198.0 0 85.4 84.6 115.4 H |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

Page 59 of 61

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203A72

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|---|------|----------|------------------|------|----------|------|
| Sample ID: MB-66276 | | SampType: MBLK | | TestCode: SM 9223B Fecal Indicator: E. coli MPN | | | | | | |
| Client ID: PBW | | Batch ID: 66276 | | RunNo: 86591 | | | | | | |
| Prep Date: 3/18/2022 | | Analysis Date: 3/19/2022 | | SeqNo: 3056252 | | | Units: MPN/100mL | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli | <1 | 1.000 | | | | | | | | |

Qualifiers:

- * Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2203A72

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: G86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059872 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.47 | 0.050 | 0.5000 | 0 | 94.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.1 | 70 | 130 | | | |

| Sample ID: 2203a72-003ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: West LDU | Batch ID: G86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059876 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.76 | 0.050 | 0.5000 | 0.2834 | 96.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.4 | 70 | 130 | | | |

| Sample ID: 2203a72-003amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: West LDU | Batch ID: G86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059877 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.77 | 0.050 | 0.5000 | 0.2834 | 98.2 | 70 | 130 | 1.43 | 20 | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | 0 | 0 | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: G86666 | | RunNo: 86666 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059882 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.040 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203A72**RcptNo: **1**Received By: **Juan Rojas** 3/18/2022 1:50:00 PMCompleted By: **Desiree Dominguez** 3/18/2022 2:01:55 PMReviewed By: *One* 3/18/22 @ 1455

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 10 5
(<2 or >12 unless noted)
Adjusted? NO

Checked by: JN 3/18/22Labeled by: sec 3/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.1 | Good | Yes | | | |
| 2 | 2.3 | Good | Yes | | | |
| 3 | 2.4 | Good | Yes | | | |

Chain-of-Custody Record

Client: Marathon Gallup Refinery

Mailing Address: 92 Giant Crossing Road

Jamestown, NM, 87347

Phone #: 808-640-1823

Mail or Fax#:

A/QC Package:

Standard ☐ Level 4 (Full Validation)Accreditation: ☐ Az ComplianceNELAC ☐ Other

EDD (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2022 GW Sampling 1st Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackenzie Swift

Sampler:

Hilario Trigo

On Ice: ☒ Yes ☐ No

of Coolers: 3

Cooler Temp (including off): See Remarks

Container

Type and #

Preservative

Type

HEAL No.

2203A72

-001

-002

-003

-004

-005

-006

-007

-001

-002

-003

-004

-005

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203B95

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/23/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 14, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203B95
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding the Equipment blank for the 8270 SIM analysis.
The Chrysene d12 internal standard area count for only the equipment blank was slightly out of range.
Insufficient sample extract remained for reanalysis. This sample is nondetect for all PAH compounds.

Analytical Notes Regarding EPA Method 8270:

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.
1-methylphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample NAPIS-2

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 2-Butanone | 6.1 | 2.0 | 10 | J | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Chloromethane | 0.88 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 88.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Surr: Dibromofluoromethane | 95.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:25:27 PM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:25:27 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.034 | 0.028 | 0.050 | J | mg/L | 1 | 3/24/2022 1:25:27 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:25:27 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 12:37:55 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.026 | 0.016 | 0.064 | J | mg/L | 1 | 3/28/2022 3:38:53 PM | 66372 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 3:38:53 PM | 66372 |
| Surr: DNOP | 114 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 3:38:53 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: 2-Fluorophenol | 46.1 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: Phenol-d5 | 35.1 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: 2,4,6-Tribromophenol | 51.5 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: Nitrobenzene-d5 | 57.4 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: 2-Fluorobiphenyl | 56.3 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| Surr: 4-Terphenyl-d14 | 90.7 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 6:49:35 AM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 5:09:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.5 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 55.8 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 5:09:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 72.3-147 | E | %Rec | 1 | 3/28/2022 5:09:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:17:36 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 12:46:19 PM | 66440 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/29/2022 12:46:19 PM | 66440 |
| Lead | 0.00027 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/29/2022 12:46:19 PM | 66440 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/29/2022 12:46:19 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:04:05 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:15:00 AM

Lab ID: 2203B95-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/24/2022 10:38:48 AM | B86739 |
| Zinc | 0.0065 | 0.0032 | 0.010 | J | mg/L | 1 | 3/24/2022 11:36:02 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:04:10 PM | B86714 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:04:10 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 2:04:10 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:04:10 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 1:50:19 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 4.8 | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 50 | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,2,4-Trimethylbenzene | 0.36 | 0.12 | 1.0 | J | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 16 | 0.25 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,1-Dichloroethane | 0.77 | 0.27 | 1.0 | J | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Isopropylbenzene | 20 | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| n-Butylbenzene | 0.97 | 0.25 | 3.0 | J | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| n-Propylbenzene | 0.97 | 0.18 | 1.0 | J | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| sec-Butylbenzene | 4.3 | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Xylenes, Total | 1.6 | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 90.8 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 95.4 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Surr: Dibromofluoromethane | 90.8 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:53:55 PM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:53:55 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.67 | 0.028 | 0.050 | | mg/L | 1 | 3/24/2022 1:53:55 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 1:53:55 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/29/2022 12:53:06 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.1 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 4:02:53 PM | 66372 |
| Motor Oil Range Organics (MRO) | 0.067 | 0.052 | 0.080 | J | mg/L | 1 | 3/28/2022 4:02:53 PM | 66372 |
| Surr: DNOP | 109 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 4:02:53 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: 2-Fluorophenol | 47.2 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: Phenol-d5 | 35.3 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 81.3 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: Nitrobenzene-d5 | 60.6 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 53.5 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 87.2 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 12:54:17 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Naphthalene | 0.18 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Phenanthrene | 0.80 | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 6:01:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.3 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 51.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 6:01:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 78.3 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 6:01:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.92 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Chromium | 0.010 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Cobalt | 0.011 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Nickel | 0.047 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Vanadium | 0.018 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| Zinc | 0.014 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:20:52 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 12:53:39 PM | 66440 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 3/29/2022 12:53:39 PM | 66440 |
| Lead | 0.0038 | 0.000061 | 0.00050 | | mg/L | 1 | 3/29/2022 12:53:39 PM | 66440 |
| Selenium | 0.00072 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/29/2022 12:53:39 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:06:14 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 8:20:00 AM

Lab ID: 2203B95-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.54 | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Cobalt | 0.0070 | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Nickel | 0.048 | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Vanadium | 0.0035 | 0.0017 | 0.050 | J | mg/L | 1 | 3/24/2022 10:40:25 AM | B86739 |
| Zinc | 0.0086 | 0.0032 | 0.010 | J | mg/L | 1 | 3/24/2022 11:37:36 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00049 | 0.00044 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:12:14 PM | B86714 |
| Arsenic | 0.0015 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:12:14 PM | B86714 |
| Lead | 0.00019 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 2:12:14 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:12:14 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 1:52:27 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 190 | 2.3 | 10 | | µg/L | 10 | 3/25/2022 11:30:48 AM | R86760 |
| Toluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Ethylbenzene | 0.56 | 0.21 | 1.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 1,2,4-Trimethylbenzene | 130 | 1.2 | 10 | | µg/L | 10 | 3/25/2022 11:30:48 AM | R86760 |
| 1,3,5-Trimethylbenzene | 120 | 1.8 | 10 | | µg/L | 10 | 3/25/2022 11:30:48 AM | R86760 |
| 1,2-Dichloroethane (EDC) | 0.47 | 0.25 | 1.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Acetone | 12 | 2.5 | 10 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 2-Butanone | 2.4 | 2.0 | 10 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Chloromethane | 2.7 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 1,1-Dichloroethene | 0.62 | 0.20 | 1.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Isopropylbenzene | 0.84 | 0.18 | 1.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 4-Isopropyltoluene | 13 | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| sec-Butylbenzene | 0.42 | 0.14 | 1.0 | J | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Trichloroethene (TCE) | 6.5 | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Xylenes, Total | 220 | 3.7 | 15 | | µg/L | 10 | 3/25/2022 11:30:48 AM | R86760 |
| Surr: 1,2-Dichloroethane-d4 | 90.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 80.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Surr: Dibromofluoromethane | 87.1 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 3:19:54 PM | R86734 |
| Surr: Toluene-d8 | 97.7 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 3:19:54 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 5.2 | 0.028 | 0.050 | | mg/L | 1 | 3/24/2022 3:19:54 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 89.3 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 3:19:54 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 1:08:17 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.4 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 4:26:51 PM | 66372 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 4:26:51 PM | 66372 |
| Surr: DNOP | 105 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 4:26:51 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 2,4-Dimethylphenol | 7.1 | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Phenol | 7.8 | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: 2-Fluorophenol | 50.1 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | S | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 75.9 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: Nitrobenzene-d5 | 65.7 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 56.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 80.8 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 1:36:16 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 16 | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Naphthalene | 5.1 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| 1-Methylnaphthalene | 2.7 | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| 2-Methylnaphthalene | 2.4 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 6:52:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.8 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 6:52:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 78.3 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 6:52:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 1.9 | 0.0082 | 0.015 | | mg/L | 5 | 4/6/2022 2:25:05 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Chromium | 0.012 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Cobalt | 0.010 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Nickel | 0.014 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Vanadium | 0.034 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| Zinc | 0.029 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:23:40 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/29/2022 1:40:05 PM | 66440 |
| Arsenic | 0.0098 | 0.00063 | 0.0050 | | mg/L | 5 | 3/29/2022 1:40:05 PM | 66440 |
| Lead | 0.0099 | 0.00031 | 0.0025 | | mg/L | 5 | 3/29/2022 1:40:05 PM | 66440 |
| Selenium | 0.0022 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/29/2022 1:40:05 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:08:22 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:15:00 AM

Lab ID: 2203B95-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.13 | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Cobalt | 0.0053 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Nickel | 0.0086 | 0.0033 | 0.010 | J | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Vanadium | 0.0027 | 0.0017 | 0.050 | J | mg/L | 1 | 3/24/2022 10:43:43 AM | B86739 |
| Zinc | 0.0091 | 0.0032 | 0.010 | J | mg/L | 1 | 3/24/2022 11:40:35 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00070 | 0.00044 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:17:37 PM | B86714 |
| Arsenic | 0.0044 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:17:37 PM | B86714 |
| Lead | 0.00041 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 2:17:37 PM | B86714 |
| Selenium | 0.00052 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:17:37 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 1:54:35 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 2.1 | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Ethylbenzene | 9.7 | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 72 | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,2,4-Trimethylbenzene | 0.61 | 0.12 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,3,5-Trimethylbenzene | 0.48 | 0.18 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Isopropylbenzene | 1.7 | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| n-Propylbenzene | 0.69 | 0.18 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| sec-Butylbenzene | 0.25 | 0.14 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Trichloroethene (TCE) | 0.30 | 0.20 | 1.0 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Xylenes, Total | 0.85 | 0.37 | 1.5 | J | µg/L | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 88.0 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Surr: Dibromofluoromethane | 95.1 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 4:45:25 PM | R86734 |
| Surr: Toluene-d8 | 99.8 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 4:45:25 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.31 | 0.028 | 0.050 | | mg/L | 1 | 3/24/2022 4:45:25 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 4:45:25 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 1:23:28 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.56 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 4:50:45 PM | 66372 |
| Motor Oil Range Organics (MRO) | 0.088 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 4:50:45 PM | 66372 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 4:50:45 PM | 66372 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: 2-Fluorophenol | 49.7 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: Phenol-d5 | 38.4 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 82.3 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: Nitrobenzene-d5 | 62.9 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 54.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 79.4 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 2:18:30 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Pyrene | 0.20 | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 7:42:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.2 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 53.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 7:42:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 77.0 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 7:42:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.21 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Vanadium | 0.019 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| Zinc | 0.0075 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 2:28:09 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 12:58:32 PM | 66440 |
| Arsenic | 0.00077 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/29/2022 1:44:58 PM | 66440 |
| Lead | 0.00052 | 0.000061 | 0.00050 | | mg/L | 1 | 3/29/2022 12:58:32 PM | 66440 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/29/2022 1:44:58 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:10:30 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.21 | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Nickel | 0.027 | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Vanadium | 0.017 | 0.0017 | 0.050 | J | mg/L | 1 | 3/24/2022 10:47:03 AM | B86739 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/24/2022 11:42:13 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:30:14 PM | B86714 |
| Arsenic | 0.00087 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:30:14 PM | B86714 |
| Lead | 0.00027 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 2:30:14 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:30:14 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 1:56:44 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 99 | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Ethylbenzene | 41 | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 67 | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,2,4-Trimethylbenzene | 0.22 | 0.12 | 1.0 | J | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Chloromethane | 0.72 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Isopropylbenzene | 4.4 | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| n-Butylbenzene | 0.32 | 0.25 | 3.0 | J | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| n-Propylbenzene | 2.7 | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| sec-Butylbenzene | 0.73 | 0.14 | 1.0 | J | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Xylenes, Total | 1.9 | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 87.7 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Surr: Dibromofluoromethane | 90.2 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 5:13:52 PM | R86734 |
| Surr: Toluene-d8 | 98.8 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 5:13:52 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.69 | 0.028 | 0.050 | | mg/L | 1 | 3/24/2022 5:13:52 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 5:13:52 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 1:38:41 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.65 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 5:14:36 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.091 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 5:14:36 PM | 66385 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 5:14:36 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Phenol | 4.2 | 0.33 | 5.0 | J | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: 2-Fluorophenol | 50.9 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: Phenol-d5 | 41.3 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 86.4 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: Nitrobenzene-d5 | 66.1 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 60.1 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 88.5 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 3:01:04 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Naphthalene | 1.5 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| 1-Methylnaphthalene | 2.3 | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| 2-Methylnaphthalene | 1.1 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Acenaphthene | 0.48 | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Fluorene | 0.32 | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Phenanthrene | 0.10 | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Pyrene | 0.18 | 0.16 | 0.20 | J | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 8:32:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.4 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 54.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 8:32:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 78.0 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 8:32:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 3.0 | 0.0082 | 0.015 | * | mg/L | 5 | 4/6/2022 2:37:23 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Cobalt | 0.0038 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Nickel | 0.025 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Vanadium | 0.0068 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| Zinc | 0.0083 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 2:35:56 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 1:05:51 PM | 66440 |
| Arsenic | 0.0046 | 0.00013 | 0.0010 | | mg/L | 1 | 3/29/2022 1:05:51 PM | 66440 |
| Lead | 0.0013 | 0.000061 | 0.00050 | | mg/L | 1 | 3/29/2022 1:05:51 PM | 66440 |
| Selenium | 0.00062 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/29/2022 1:05:51 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:12:39 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:30:00 AM

Lab ID: 2203B95-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 2.6 | 0.0056 | 0.010 | * | mg/L | 5 | 3/24/2022 10:58:20 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Cobalt | 0.0027 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Nickel | 0.028 | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/24/2022 10:56:39 AM | B86739 |
| Zinc | 0.0056 | 0.0032 | 0.010 | J | mg/L | 1 | 3/24/2022 11:43:52 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:32:55 PM | B86714 |
| Arsenic | 0.0011 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:32:55 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 2:32:55 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:32:55 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 1:58:53 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:00:00 AM

Lab ID: 2203B95-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 790 | 2.3 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Toluene | ND | 2.0 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Ethylbenzene | 150 | 2.1 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 110 | 3.9 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,2,4-Trimethylbenzene | 2.0 | 1.2 | 10 | J | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Chloromethane | 6.7 | 4.1 | 30 | J | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Isopropylbenzene | 9.4 | 1.8 | 10 | J | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| n-Butylbenzene | ND | 2.5 | 30 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| n-Propylbenzene | 8.2 | 1.8 | 10 | J | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| sec-Butylbenzene | ND | 1.4 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Xylenes, Total | 24 | 3.7 | 15 | | µg/L | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 78.6 | 0 | 70-130 | | %Rec | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 96.8 | 0 | 70-130 | | %Rec | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Surr: Dibromofluoromethane | 88.1 | 0 | 70-130 | | %Rec | 10 | 3/24/2022 5:42:16 PM | R86734 |
| Surr: Toluene-d8 | 99.8 | 0 | 70-130 | | %Rec | 10 | 3/24/2022 5:42:16 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 3.5 | 0.28 | 0.50 | | mg/L | 10 | 3/24/2022 5:42:16 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 10 | 3/24/2022 5:42:16 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203B95-006B

Client Sample ID: NAPIS-2

Collection Date: 3/22/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/29/2022 2:08:57 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:00:00 AM

Lab ID: 2203B95-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.4 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 3:18:14 AM | 66385 |
| Motor Oil Range Organics (MRO) | 0.16 | 0.052 | 0.080 | | mg/L | 1 | 3/29/2022 3:18:14 AM | 66385 |
| Surr: DNOP | 94.2 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 3:18:14 AM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 2,4-Dimethylphenol | 4.1 | 0.97 | 5.0 | J | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 1-Methylnaphthalene | 45 | 0.60 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Phenol | 48 | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: 2-Fluorophenol | 52.7 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: Phenol-d5 | 41.0 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 87.0 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: Nitrobenzene-d5 | 69.8 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 59.2 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 82.9 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 3:43:42 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.5 | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Naphthalene | 18 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| 2-Methylnaphthalene | 10 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Acenaphthene | 2.8 | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Fluorene | 2.8 | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Phenanthrene | 0.64 | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Anthracene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 9:21:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:00:00 AM

Lab ID: 2203B95-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.3 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 54.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 9:21:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 75.4 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 9:21:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:00:00 AM

Lab ID: 2203B95-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.1 | 0.016 | 0.030 | * | mg/L | 10 | 4/6/2022 5:12:16 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Cobalt | 0.0036 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Nickel | 0.053 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Vanadium | 0.011 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| Zinc | 0.016 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:38:48 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 1:08:18 PM | 66440 |
| Arsenic | 0.0050 | 0.00013 | 0.0010 | | mg/L | 1 | 3/29/2022 1:08:18 PM | 66440 |
| Lead | 0.0033 | 0.000061 | 0.00050 | | mg/L | 1 | 3/29/2022 1:08:18 PM | 66440 |
| Selenium | 0.00062 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/29/2022 1:08:18 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:14:45 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 10:00:00 AM

Lab ID: 2203B95-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 4.4 | 0.0056 | 0.010 | * | mg/L | 5 | 3/24/2022 11:01:28 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Nickel | 0.056 | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/24/2022 11:00:01 AM | B86739 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 3/24/2022 11:45:34 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:35:36 PM | B86714 |
| Arsenic | 0.0018 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:35:36 PM | B86714 |
| Lead | 0.00026 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 2:35:36 PM | B86714 |
| Selenium | 0.00046 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:35:36 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:01:02 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 6.1 | 1.1 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Ethylbenzene | ND | 1.1 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 270 | 2.0 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,1-Dichloroethane | 2.8 | 1.4 | 5.0 | J | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 86.8 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Surr: Dibromofluoromethane | 88.6 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 6:10:45 PM | R86734 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 6:10:45 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.56 | 0.14 | 0.25 | | mg/L | 5 | 3/24/2022 6:10:45 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 6:10:45 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 2:24:07 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 7.0 | 0.080 | 0.32 | | mg/L | 5 | 3/29/2022 5:05:19 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.96 | 0.26 | 0.40 | | mg/L | 5 | 3/29/2022 5:05:19 PM | 66385 |
| Surr: DNOP | 96.4 | 0 | 42.2-138 | | %Rec | 5 | 3/29/2022 5:05:19 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: 2-Fluorophenol | 54.4 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: Phenol-d5 | 43.6 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 81.2 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: Nitrobenzene-d5 | 67.9 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 63.3 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 82.8 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 4:26:41 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.9 | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Pyrene | 0.22 | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 10:10:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.1 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 56.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 10:10:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 72.8 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 10:10:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.97 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Cobalt | 0.010 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Nickel | 0.16 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Vanadium | 0.029 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| Zinc | 0.019 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:41:38 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/29/2022 1:10:44 PM | 66440 |
| Arsenic | 0.0054 | 0.00063 | 0.0050 | | mg/L | 5 | 3/29/2022 1:10:44 PM | 66440 |
| Lead | 0.0055 | 0.00031 | 0.0025 | | mg/L | 5 | 3/29/2022 1:10:44 PM | 66440 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/29/2022 1:10:44 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:16:54 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OAPIS-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 9:35:00 AM

Lab ID: 2203B95-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.94 | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Cobalt | 0.011 | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Nickel | 0.16 | 0.0033 | 0.010 | * | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Vanadium | 0.024 | 0.0017 | 0.050 | J | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| Zinc | 0.025 | 0.0032 | 0.010 | | mg/L | 1 | 3/24/2022 11:47:16 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/24/2022 2:38:18 PM | B86714 |
| Arsenic | 0.0050 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/24/2022 2:38:18 PM | B86714 |
| Lead | 0.0059 | 0.00028 | 0.0025 | | mg/L | 5 | 3/24/2022 2:38:18 PM | B86714 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/24/2022 2:38:18 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:03:12 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 5.0 | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Toluene | 0.21 | 0.20 | 1.0 | J | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 51 | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,2,4-Trimethylbenzene | 0.40 | 0.12 | 1.0 | J | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 17 | 0.25 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,1-Dichloroethane | 0.80 | 0.27 | 1.0 | J | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Isopropylbenzene | 20 | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| n-Butylbenzene | 0.96 | 0.25 | 3.0 | J | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| n-Propylbenzene | 0.92 | 0.18 | 1.0 | J | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| sec-Butylbenzene | 4.2 | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Xylenes, Total | 1.8 | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 88.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Surr: Dibromofluoromethane | 89.9 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 6:39:23 PM | R86734 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 6:39:23 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.69 | 0.028 | 0.050 | | mg/L | 1 | 3/24/2022 6:39:23 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 6:39:23 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0094 | | µg/L | 1 | 3/29/2022 2:39:23 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.1 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 5:38:35 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.058 | 0.052 | 0.080 | J | mg/L | 1 | 3/28/2022 5:38:35 PM | 66385 |
| Surr: DNOP | 110 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 5:38:35 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: 2-Fluorophenol | 55.6 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: Phenol-d5 | 40.3 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: 2,4,6-Tribromophenol | 102 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: Nitrobenzene-d5 | 75.9 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: 2-Fluorobiphenyl | 71.3 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| Surr: 4-Terphenyl-d14 | 90.9 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 5:09:38 PM | 66355 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Naphthalene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Acenaphthene | 0.22 | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Phenanthrene | 1.0 | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Anthracene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Pyrene | 0.26 | 0.16 | 0.20 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/28/2022 10:58:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.7 | 0 | 31.6-100 | | %Rec | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Surr: 2-Fluorobiphenyl | 58.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/28/2022 10:58:00 PM | R86800 |
| Surr: 4-Terphenyl-d14 | 75.5 | 0 | 72.3-147 | | %Rec | 1 | 3/28/2022 10:58:00 PM | R86800 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.83 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Chromium | 0.0081 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Cobalt | 0.010 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Nickel | 0.046 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Vanadium | 0.015 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| Zinc | 0.012 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:44:30 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/29/2022 1:13:11 PM | 66440 |
| Arsenic | 0.0034 | 0.00013 | 0.0010 | | mg/L | 1 | 3/29/2022 1:13:11 PM | 66440 |
| Lead | 0.0029 | 0.000061 | 0.00050 | | mg/L | 1 | 3/29/2022 1:13:11 PM | 66440 |
| Selenium | 0.00070 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/29/2022 1:13:11 PM | 66440 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/25/2022 3:19:03 PM | 66396 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022

Lab ID: 2203B95-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.55 | 0.0011 | 0.0020 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Cobalt | 0.0078 | 0.0024 | 0.0060 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Nickel | 0.048 | 0.0033 | 0.010 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Vanadium | 0.0037 | 0.0017 | 0.050 | J | mg/L | 1 | 3/24/2022 11:06:32 AM | B86739 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 3/24/2022 11:48:44 AM | B86739 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:40:59 PM | B86714 |
| Arsenic | 0.0013 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:40:59 PM | B86714 |
| Lead | 0.00014 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 2:40:59 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:40:59 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:05:20 PM | 66455 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-3-22-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/22/2022 11:00:00 AM

Lab ID: 2203B95-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 2-Butanone | 4.6 | 2.0 | 10 | J | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Chloromethane | 0.76 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 85.0 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 96.3 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Surr: Dibromofluoromethane | 91.2 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:07:50 PM | R86734 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:07:50 PM | R86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203B95-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 82.1 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Surr: Dibromofluoromethane | 89.7 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:36:15 PM | R86734 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 7:36:15 PM | R86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203B95

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|--------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | Trip Blank |
| Project: | 2022 GW Sampling 1st Qtr | Collection Date: | |
| Lab ID: | 2203B95-010B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 2:54:36 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

April 04, 2022

Hall Environmental Analysis Laboratory

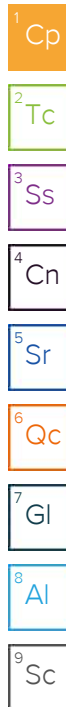
Sample Delivery Group: L1474926

Samples Received: 03/24/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2203B95-001F EB 3-22-22 L1474926-01 | 5 | |
| 2203B95-002F OW-70 L1474926-02 | 6 | <div><div>4</div>Cn</div> |
| 2203B95-003F OW-12A L1474926-03 | 7 | <div><div>5</div>Sr</div> |
| 2203B95-004F KA-3 L1474926-04 | 8 | |
| 2203B95-005F NAPIS-3 L1474926-05 | 9 | <div><div>6</div>Qc</div> |
| 2203B95-006F NAPIS-2 L1474926-06 | 10 | |
| 2203B95-007F OAPIS-1 L1474926-07 | 11 | <div><div>7</div>Gl</div> |
| 2203B95-008B DUP-3-22-22 L1474926-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 4500CN E-2016 | 13 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 15 | |
| Al: Accreditations & Locations | 16 | |
| Sc: Sample Chain of Custody | 17 | |

2203B95-001F EB 3-22-22 L1474926-01 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:23 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203B95-002F OW-70 L1474926-02 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:26 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-003F OW-12A L1474926-03 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:27 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-004F KA-3 L1474926-04 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:30 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-005F NAPIS-3 L1474926-05 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:31 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-006F NAPIS-2 L1474926-06 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:32 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-007F OAPIS-1 L1474926-07 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1838531 | 1 | 03/28/22 08:13 | 03/29/22 17:33 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203B95-008B DUP-3-22-22 L1474926-08 GW

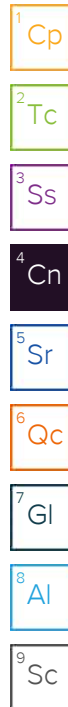
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:18 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/29/2022 17:23 | WG1838531 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/22/22 08:20

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/29/2022 17:26 | WG1838531 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/29/2022 17:27 | WG1838531 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0121 | | 0.00500 | 1 | 03/29/2022 17:30 | WG1838531 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 03/22/22 10:30

L1474926

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00935 | | 0.00500 | 1 | 03/29/2022 17:31 | WG1838531 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0123 | | 0.00500 | 1 | 03/29/2022 17:32 | WG1838531 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 03/22/22 09:35

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis | Batch |
|---------|--------|-----------|---------|----------|------------------|---------------------------|
| | mg/l | | mg/l | | date / time | |
| Cyanide | 0.0679 | | 0.00500 | 1 | 03/29/2022 17:33 | WG1838531 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/01/2022 13:18 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3775338-1 03/29/22 16:59

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1474866-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1474866-01 03/29/22 17:06 • (DUP) R3775338-3 03/29/22 17:07

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.0336 | 0.0313 | 1 | 7.09 | | 20 |

L1474926-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1474926-01 03/29/22 17:23 • (DUP) R3775338-6 03/29/22 17:25

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3775338-2 03/29/22 17:00

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0971 | 97.1 | 87.1-120 | |

L1474866-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1474866-03 03/29/22 17:11 • (MS) R3775338-4 03/29/22 17:12 • (MSD) R3775338-5 03/29/22 17:13

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0933 | 0.0932 | 93.3 | 93.2 | 1 | 90.0-110 | | | 0.107 | 20 |

L1474926-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1474926-03 03/29/22 17:27 • (MS) R3775338-7 03/29/22 17:28 • (MSD) R3775338-8 03/29/22 17:29

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0984 | 0.0966 | 98.4 | 96.6 | 1 | 90.0-110 | | | 1.85 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1474926-08

Method Blank (MB)

(MB) R3776612-1 04/01/22 13:14

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|---------|
| | mg/l | | mg/l | mg/l |
| Cyanide | U | | 0.00180 | 0.00500 |

L1474926-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1474926-08 04/01/22 13:18 • (DUP) R3776612-3 04/01/22 13:19

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1475080-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1475080-05 04/01/22 13:29 • (DUP) R3776612-6 04/01/22 13:30

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | mg/l | mg/l | | % | | % |
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3776612-2 04/01/22 13:15

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | mg/l | mg/l | % | % | |
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1475080-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1475080-01 04/01/22 13:21 • (MS) R3776612-4 04/01/22 13:22 • (MSD) R3776612-5 04/01/22 13:23

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-----|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | ND | 0.0973 | 0.0284 | 97.3 | 28.4 | 1 | 90.0-110 | | J3 J6 | 110 | 20 |

L1475080-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1475080-06 04/01/22 13:32 • (MS) R3776612-7 04/01/22 13:33 • (MSD) R3776612-8 04/01/22 13:34

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | ND | 0.104 | 0.0773 | 99.8 | 73.1 | 1 | 90.0-110 | | J3 J6 | 29.5 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

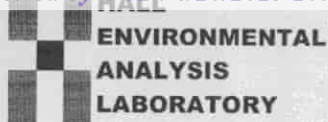
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

C113

| | | | |
|---|-------------------------|------------------------------|----------------------------|
| SUB CONTRACTOR: Pace TN | COMPANY: PACE TN | PHONE: (800) 767-5859 | FAX: (615) 758-5859 |
| ADDRESS: 12065 Lebanon Rd | ACCOUNT # | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | L1474926 |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|---------------------|
| 1 | 2203B95-001F | EB 3-22-22 | 500AMBHDP | Groundw | 3/22/2022 8:15:00 AM | 1 | Total Cyanide |
| 2 | 2203B95-002F | OW-70 | 500AMBHDP | Groundw | 3/22/2022 8:20:00 AM | 1 | Total Cyanide |
| 3 | 2203B95-003F | OW-12A | 500AMBHDP | Groundw | 3/22/2022 9:15:00 AM | 1 | Total Cyanide |
| 4 | 2203B95-004F | KA-3 | 500AMBHDP | Groundw | 3/22/2022 11:00:00 AM | 1 | Total Cyanide |
| 5 | 2203B95-005F | NAPIS-3 | 500AMBHDP | Groundw | 3/22/2022 10:30:00 AM | 1 | Total Cyanide |
| 6 | 2203B95-006F | NAPIS-2 | 500AMBHDP | Groundw | 3/22/2022 10:00:00 AM | 1 | Total Cyanide |
| 7 | 2203B95-007F | OAPIS-1 | 500AMBHDP | Groundw | 3/22/2022 9:35:00 AM | 1 | Total Cyanide |
| 8 | 2203B95-008F | DUP-3-22-22 | 500AMBHDP | Groundw | 3/22/2022 | 1 | Total Cyanide |

RCV >12
- 01
- 02
- 03
- 04
- 05
- 06
- 07
- 08

Sample Receipt Checklist
COC Seal Present/Intact: ☒ Y ☐ N If Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|----------------------------|-------------------|----------------|---------------------------------|----------------|------------|---|
| Relinquished By: <i>CM</i> | Date: 3/23/2022 | Time: 11:25 AM | Received By: <i>[Signature]</i> | Date: 03/24/22 | Time: 0900 | REPORT TRANSMITTAL DESIRED:
HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE ☐ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples: 1.9 <i>DRAC</i> Attempt to Cool? ☐ |
| TAT: | Standard <i>X</i> | RUSH | Nest BD | 2nd BD | 3rd BD | Comments: |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062602 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062604 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0030 | 0.002000 | 0 | 99.9 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Cadmium | 0.0026 | 0.0020 | 0.002000 | 0 | 132 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 113 | 50 | 150 | | | |
| Nickel | 0.0060 | 0.010 | 0.005000 | 0 | 119 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 107 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 102 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 103 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062606 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66643 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075587 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-66643 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075588 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.8 | 50 | 150 | | | J |
| Chromium | 0.0056 | 0.0060 | 0.006000 | 0 | 92.5 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 69.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.5 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 99.8 | 50 | 150 | | | J |

| Sample ID: LCS-66643 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075589 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.4 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66644 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 66644 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075590 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-66644 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 66644 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075594 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 95.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.6 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 99.1 | 50 | 150 | | | J |
| Cobalt | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 67.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.3 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-66644 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 66644 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075595 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.3 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.7 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062603 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062605 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.9 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Cadmium | 0.0026 | 0.0020 | 0.002000 | 0 | 132 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 113 | 50 | 150 | | | |
| Nickel | 0.0060 | 0.010 | 0.005000 | 0 | 119 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 107 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 102 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 103 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86739 | RunNo: 86739 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062607 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66440 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66440 | RunNo: 86813 |
| Prep Date: 3/28/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066571 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66440 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66440 | RunNo: 86813 |
| Prep Date: 3/28/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066572 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0010 | 0.0010 0.001000 0 101 50 150 |
| Arsenic | 0.00098 | 0.0010 0.001000 0 97.8 50 150 J |
| Lead | 0.00053 | 0.00050 0.0005000 0 106 50 150 |
| Selenium | 0.00094 | 0.0010 0.001000 0 93.7 50 150 J |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66440 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66440 | RunNo: 86813 |
| Prep Date: 3/28/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066573 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.026 | 0.0010 0.02500 0 104 85 115 |
| Arsenic | 0.026 | 0.0010 0.02500 0 103 85 115 |
| Lead | 0.013 | 0.00050 0.01250 0 104 85 115 |
| Selenium | 0.024 | 0.0010 0.02500 0 96.6 85 115 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2203B95-001DMSLL | SampType: MS | TestCode: EPA 200.8: Metals |
| Client ID: EB 3-22-22 | Batch ID: 66440 | RunNo: 86813 |
| Prep Date: 3/28/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066580 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.026 | 0.0010 0.02500 0 104 70 130 |
| Arsenic | 0.026 | 0.0010 0.02500 0 103 70 130 |
| Lead | 0.013 | 0.00050 0.01250 0.0002684 102 70 130 |
| Selenium | 0.024 | 0.0010 0.02500 0 95.1 70 130 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2203B95-001DMSDL | SampType: MSD | TestCode: EPA 200.8: Metals |
| Client ID: EB 3-22-22 | Batch ID: 66440 | RunNo: 86813 |
| Prep Date: 3/28/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066581 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203B95-001DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB 3-22-22 | | Batch ID: 66440 | | RunNo: 86813 | | | | | | |
| Prep Date: 3/28/2022 | | Analysis Date: 3/29/2022 | | SeqNo: 3066581 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | 1.22 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 0.813 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0.0002684 | 102 | 70 | 130 | 0.490 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | 5.14 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062323 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062324 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Selenium | 0.00080 | 0.0010 | 0.001000 | 0 | 80.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062325 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203B95-001EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB 3-22-22 | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062327 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.9 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 98.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203B95-001EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB 3-22-22 | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062328 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203B95-001EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB 3-22-22 | | Batch ID: B86714 | | RunNo: 86714 | | | | | | |
| Prep Date: | | Analysis Date: 3/24/2022 | | SeqNo: 3062328 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | 1.66 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 1.14 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.5 | 70 | 130 | 0.451 | 20 | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | 4.45 | 20 | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203B95-002EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: OW-70 | | Batch ID: B86714 | | RunNo: 86714 | | | | | | |
| Prep Date: | | Analysis Date: 3/24/2022 | | SeqNo: 3062330 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0.0004915 | 104 | 70 | 130 | | | |
| Arsenic | 0.030 | 0.0010 | 0.02500 | 0.001473 | 114 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.0001869 | 90.0 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66396 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66396 | RunNo: 86753 |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063465 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00014 | 0.00020 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66396 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66396 | RunNo: 86753 |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063467 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 | 0.00020 0.005000 0 103 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2203B95-008DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-3-22-22 | Batch ID: 66396 | RunNo: 86753 |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063509 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0043 | 0.00020 0.005000 0 86.2 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2203B95-008DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-3-22-22 | Batch ID: 66396 | RunNo: 86753 |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063512 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0045 | 0.00020 0.005000 0 89.3 75 125 3.55 20 |

| | | |
|------------------------|--------------------------|--|
| Sample ID: LCSLL-66396 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66396 | RunNo: 86753 |
| Prep Date: 3/25/2022 | Analysis Date: 3/25/2022 | SeqNo: 3063514 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00018 | 0.00020 0.0001500 0 122 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66455 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66455 | RunNo: 86816 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3065974 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-66455 | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | Batch ID: 66455 | | RunNo: 86816 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | | SeqNo: 3065975 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00015 | 0.00020 | 0.0001500 | 0 | 98.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66455 | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: LCSW | Batch ID: 66455 | | RunNo: 86816 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | | SeqNo: 3065976 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0048 | 0.00020 | 0.005000 | 0 | 96.8 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66393 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066617 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66393 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066620 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66393 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066625 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 112 70 130 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66372 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065857 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.041 | | 0.03750 | | 108 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-66372 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065858 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 65.1 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.021 | | 0.01875 | | 114 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66372 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66372 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065859 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | 0.1875 | 0 | 55.2 | 31.7 | 75.4 | 16.4 | 20 | |
| Surr: DNOP | 0.019 | | 0.01875 | | 101 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66385 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66385 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065860 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.044 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.041 | | 0.03750 | | 110 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-66385 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66385 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065861 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.20 | 0.064 | 0.1875 | 0 | 107 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.028 | | 0.01875 | | 148 | 42.2 | 138 | | | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66385 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66385 | | RunNo: 86806 | | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | | SeqNo: 3065862 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 59.4 | 31.7 | 75.4 | 56.8 | 20 | R |
| Surr: DNOP | 0.019 | | 0.01875 | | 104 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062248 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.5 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 97.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 88.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 92.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203b95-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-70 | Batch ID: R86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062253 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 4.823 | 74.7 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.8 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 84.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 82.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.4 | | 10.00 | | 94.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 96.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203b95-002amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-70 | Batch ID: R86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062254 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 4.823 | 70.3 | 70 | 130 | 4.51 | 20 | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | 1.99 | 20 | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | 1.68 | 20 | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 83.8 | 70 | 130 | 0.954 | 20 | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 80.8 | 70 | 130 | 2.14 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.4 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 92.8 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R86734 | | | RunNo: 86734 | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | | SeqNo: 3062277 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 87.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: R86760 | | | RunNo: 86760 | | | | | | |
| Prep Date: | Analysis Date: 3/25/2022 | | | SeqNo: 3063673 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 17 | 1.0 | 20.00 | 0 | 85.1 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.3 | | 10.00 | | 83.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.9 | | 10.00 | | 89.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R86760 | | | RunNo: 86760 | | | | | | |
| Prep Date: | Analysis Date: 3/25/2022 | | | SeqNo: 3063681 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 86.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 107 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66355 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 66355 | | RunNo: 86930 | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/1/2022 | | SeqNo: 3071399 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 53 | 5.0 | 100.0 | 0 | 52.9 | 15 | 87.6 | | | |
| Phenol | 82 | 5.0 | 200.0 | 0 | 41.1 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 52.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 82 | | 200.0 | | 41.1 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 57.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.2 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 60.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 88.5 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66355 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66355 | | RunNo: 86930 | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/1/2022 | | SeqNo: 3071400 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 47.5 | 15 | 87.6 | 10.8 | 30.4 | |
| Phenol | 66 | 5.0 | 200.0 | 0 | 33.1 | 16.8 | 70.5 | 21.7 | 37.2 | |
| Surr: 2-Fluorophenol | 81 | | 200.0 | | 40.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 67 | | 200.0 | | 33.7 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.1 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 55 | | 100.0 | | 55.4 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 50.0 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 90 | | 100.0 | | 89.7 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66355 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 66355 | | RunNo: 87124 | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/7/2022 | | SeqNo: 3080303 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66355 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66355 | RunNo: 87124 | | | | | | | | |
| Prep Date: 3/23/2022 | Analysis Date: 4/7/2022 | SeqNo: 3080303 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 71 | | 200.0 | | 35.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 100 | | 200.0 | | 50.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 46 | | 200.0 | | 23.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 62.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 89.2 | 48 | 155 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66355 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
|----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: R86800 | | RunNo: 86800 | | | | | | |
| Prep Date: | | Analysis Date: 3/28/2022 | | SeqNo: 3065215 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 27 | | 200.0 | | 13.7 | 22 | 101 | | | S |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 52.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 101 | 72.3 | 147 | | | E |

| Sample ID: lcs-66355-lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | | Batch ID: R86800 | | RunNo: 86800 | | | | | | |
| Prep Date: | | Analysis Date: 3/28/2022 | | SeqNo: 3065216 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.10 | 2.000 | 0 | 31.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.98 | 0.10 | 2.000 | 0 | 49.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.96 | 0.10 | 2.000 | 0 | 48.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 67.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 71.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 52.9 | 123 | | | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 81.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.8 | 0.10 | 2.000 | 0 | 92.0 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.10 | 2.000 | 0 | 90.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 60.8 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-66355-If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R86800 | | RunNo: 86800 | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | | SeqNo: 3065216 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 84 | | 200.0 | | 42.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 100.0 | | 59.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 91.8 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-66355-If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R86800 | | RunNo: 86800 | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | | SeqNo: 3065217 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 12.1 | 30.1 | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 21.3 | 79.9 | 15.1 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 22.2 | 80.3 | 15.4 | 25 | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 55.0 | 20.6 | 80.1 | 15.7 | 25 | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 63.0 | 29.8 | 82.7 | 10.0 | 27.8 | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 65.0 | 33.3 | 86 | 8.00 | 26.4 | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 69.0 | 38.2 | 93.9 | 2.94 | 27.9 | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 41.1 | 95.6 | 1.40 | 25.6 | |
| Fluoranthene | 1.6 | 0.20 | 2.000 | 0 | 79.0 | 52.9 | 123 | 4.94 | 22.8 | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 82.0 | 51 | 113 | 1.23 | 20 | |
| Benz(a)anthracene | 1.8 | 0.10 | 2.000 | 0 | 90.0 | 51 | 147 | 2.20 | 24.1 | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 55.3 | 115 | 1.16 | 20 | |
| Benzo(b)fluoranthene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 44.4 | 136 | 3.39 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 100 | 31.4 | 165 | 5.13 | 21.1 | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.8 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 84 | | 200.0 | | 42.0 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.2 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 95.0 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203B95

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062281 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203b95-003ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-12A | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062285 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 5.8 | 0.050 | 0.5000 | 5.231 | 108 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |

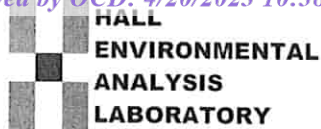
| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203b95-003amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-12A | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062286 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 5.6 | 0.050 | 0.5000 | 5.231 | 64.3 | 70 | 130 | 3.87 | 20 | S |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062303 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.041 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203B95

RcptNo: 1

Received By: Kasandra Payan 3/23/2022 9:10:00 AM

Completed By: Cheyenne Cason 3/23/2022 9:26:43 AM

Reviewed By: DAD 3/23/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 16 8
(<2 or >12 unless noted)

Adjusted? yes

Checked by: KPG 3/23/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

Added 0.5 ml of HNO_3 to sample 0070
for proper pH <2 - KPG 3/23/22

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.8 | Good | Yes | | | |
| 2 | 0.1 | Good | Yes | | | |
| 3 | 0.6 | Good | Yes | | | |
| 4 | 0.9 | Good | Yes | | | |

Chain-of-Custody Record

Marathon Gallup Refinery

Turn-Around Time:

X Standard Rush

Project Name:

2022 GW Sampling 1st Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

On Ice: ☒ Yes ☐ NoSampler: *Hilario Trejo*

of Coolers: 4

Cooler Temp (including OF): See Remarks

Container Type and #

Preservative Type

HEAL No.

2203395

001

002

003

004

005

006

007

008

009

010

011

012

013

014

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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203C69

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 12 sample(s) on 3/24/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 13, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203C69
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

"S" flagged denote that the surrogate recoveries are outside of the standard limits due to matrix interferences/sample dilution.

Naphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample OW-55.

Naphthalene, 1-methylnaphthalene, 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for the following sample: OW-66

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 2-Butanone | 5.0 | 2.0 | 10 | J | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 90.4 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 99.0 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Surr: Dibromofluoromethane | 96.2 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 8:04:52 PM | R86734 |
| Surr: Toluene-d8 | 98.8 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 8:04:52 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.034 | 0.028 | 0.050 | J | mg/L | 1 | 3/24/2022 8:04:52 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/24/2022 8:04:52 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 3:55:21 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.033 | 0.016 | 0.064 | J | mg/L | 1 | 3/28/2022 6:02:24 PM | 66385 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 6:02:24 PM | 66385 |
| Surr: DNOP | 110 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 6:02:24 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: 2-Fluorophenol | 52.2 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: Phenol-d5 | 38.6 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 73.0 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: Nitrobenzene-d5 | 61.1 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 56.7 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 82.1 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 8:01:54 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 12:45:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.0 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 58.1 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 12:45:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 95.8 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 12:45:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:47:18 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:15:24 PM | 66472 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:15:24 PM | 66472 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 1:15:24 PM | 66472 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 1:15:24 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:22:46 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Nickel | 0.0035 | 0.0033 | 0.010 | J | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| Zinc | 0.0063 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 1:56:06 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:43:40 PM | B86714 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 2:43:40 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 2:43:40 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:43:40 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:07:27 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 12 | 1.1 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Ethylbenzene | 13 | 1.1 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 1300 | 20 | 50 | | µg/L | 50 | 3/24/2022 8:33:17 PM | R86734 |
| 1,2,4-Trimethylbenzene | 4.2 | 0.61 | 5.0 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 2.3 | 1.3 | 5.0 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Chloroform | 1.6 | 0.67 | 5.0 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Chloromethane | 3.9 | 2.1 | 15 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| n-Propylbenzene | 1.2 | 0.91 | 5.0 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Xylenes, Total | 2.0 | 1.9 | 7.5 | J | µg/L | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 87.5 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 93.4 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Surr: Dibromofluoromethane | 94.2 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 9:01:40 PM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 9:01:40 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 2.0 | 0.14 | 0.25 | | mg/L | 5 | 3/24/2022 9:01:40 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 5 | 3/24/2022 9:01:40 PM | G86734 |

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| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 4:10:32 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.2 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 6:26:12 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.13 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 6:26:12 PM | 66385 |
| Surr: DNOP | 113 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 6:26:12 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: 2-Fluorophenol | 46.9 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: Phenol-d5 | 38.2 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 85.9 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: Nitrobenzene-d5 | 61.7 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 57.4 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 84.4 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 8:44:39 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 1:30:00 PM | R86913 |

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| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.1 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 52.8 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 1:30:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 73.7 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 1:30:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.39 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Chromium | 0.0064 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Cobalt | 0.078 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Nickel | 0.24 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Vanadium | 0.015 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| Zinc | 0.031 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 2:55:26 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:20:16 PM | 66472 |
| Arsenic | 0.0098 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:20:16 PM | 66472 |
| Lead | 0.023 | 0.000061 | 0.00050 | * | mg/L | 1 | 3/31/2022 1:20:16 PM | 66472 |
| Selenium | 0.0012 | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 1:20:16 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/28/2022 3:33:24 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:20:00 AM

Lab ID: 2203C69-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.20 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Cobalt | 0.086 | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Nickel | 0.27 | 0.0033 | 0.010 | * | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| Zinc | 0.017 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 2:03:04 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00047 | 0.00044 | 0.0010 | J | mg/L | 1 | 3/24/2022 3:42:54 PM | B86714 |
| Arsenic | 0.0081 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 3:42:54 PM | B86714 |
| Lead | 0.0064 | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 3:42:54 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 3:42:54 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:09:34 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:50:00 AM

Lab ID: 2203C69-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-----|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 21000 | 110 | 500 | | µg/L | 500 | 3/24/2022 9:30:11 PM | R86734 |
| Toluene | 24000 | 100 | 500 | | µg/L | 500 | 3/24/2022 9:30:11 PM | R86734 |
| Ethylbenzene | 1000 | 11 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Methyl tert-butyl ether (MTBE) | 660 | 20 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,2,4-Trimethylbenzene | 1400 | 6.1 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,3,5-Trimethylbenzene | 410 | 9.1 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,2-Dichloroethane (EDC) | 21 | 13 | 50 | J | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Chloromethane | 54 | 21 | 150 | J | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,1-Dichloroethane | 27 | 14 | 50 | J | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Isopropylbenzene | 17 | 9.1 | 50 | J | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| n-Butylbenzene | 13 | 13 | 150 | J | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| n-Propylbenzene | 71 | 9.1 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Xylenes, Total | 11000 | 19 | 75 | | µg/L | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 87.0 | 0 | 70-130 | | %Rec | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Surr: 4-Bromofluorobenzene | 93.5 | 0 | 70-130 | | %Rec | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Surr: Dibromofluoromethane | 90.6 | 0 | 70-130 | | %Rec | 50 | 3/24/2022 9:58:47 PM | R86734 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 50 | 3/24/2022 9:58:47 PM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 130 | 1.4 | 2.5 | | mg/L | 50 | 3/24/2022 9:58:47 PM | G86734 |
| Surr: 4-Bromofluorobenzene | 97.4 | 0 | 70-130 | | %Rec | 50 | 3/24/2022 9:58:47 PM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203C69-003B

Client Sample ID: OW-66

Collection Date: 3/23/2022 8:50:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 4:25:42 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:50:00 AM

Lab ID: 2203C69-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 6.6 | 0.16 | 0.64 | | mg/L | 10 | 3/29/2022 4:17:03 PM | 66385 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/29/2022 4:17:03 PM | 66385 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/29/2022 4:17:03 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 11 | 200 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 45 | 100 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Di-n-butyl phthalate | ND | 65 | 100 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Di-n-octyl phthalate | ND | 31 | 200 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 7.0 | 50 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Diethyl phthalate | ND | 39 | 100 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Dimethyl phthalate | ND | 20 | 100 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 2,4-Dimethylphenol | 22 | 9.7 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 2,4-Dinitrophenol | ND | 5.0 | 50 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 1-Methylnaphthalene | 25 | 6.0 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 2-Methylnaphthalene | 46 | 4.1 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 2-Methylphenol | 25 | 5.1 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 3+4-Methylphenol | 40 | 4.5 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Naphthalene | 150 | 22 | 50 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Phenol | 46 | 3.3 | 50 | JD | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Pyridine | ND | 100 | 100 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 4.3 | 50 | D | µg/L | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 4/2/2022 9:27:06 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Acenaphthene | 0.28 | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Fluorene | 0.84 | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Phenanthrene | 1.2 | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Pyrene | 0.24 | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 2:14:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:50:00 AM

Lab ID: 2203C69-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.3 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 50.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 2:14:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 66.9 | 0 | 72.3-147 | S | %Rec | 1 | 3/30/2022 2:14:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:50:00 AM

Lab ID: 2203C69-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 2.3 | 0.0082 | 0.015 | * | mg/L | 5 | 4/6/2022 3:08:07 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Chromium | 0.017 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Cobalt | 0.0095 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Nickel | 0.33 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Vanadium | 0.034 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| Zinc | 0.023 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 3:03:53 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:22:43 PM | 66472 |
| Arsenic | 0.0098 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:22:43 PM | 66472 |
| Lead | 0.038 | 0.00061 | 0.0050 | * | mg/L | 10 | 3/31/2022 3:37:49 PM | 66472 |
| Selenium | 0.0024 | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 1:22:43 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:35:32 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 8:50:00 AM

Lab ID: 2203C69-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 1.8 | 0.0056 | 0.010 | | mg/L | 5 | 3/29/2022 2:07:48 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Cobalt | 0.0053 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Nickel | 0.37 | 0.0033 | 0.010 | * | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Vanadium | 0.0029 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| Zinc | 0.0081 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:06:24 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/24/2022 3:48:17 PM | B86714 |
| Arsenic | 0.0063 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 4:12:30 PM | B86714 |
| Lead | 0.00069 | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 4:12:30 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 4:12:30 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:15:57 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-----|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 7300 | 110 | 500 | | µg/L | 500 | 3/25/2022 12:21:17 AM | R86734 |
| Toluene | 270 | 10 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Ethylbenzene | 550 | 11 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 970 | 20 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,2,4-Trimethylbenzene | 250 | 6.1 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,3,5-Trimethylbenzene | 57 | 9.1 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Chloroform | 11 | 6.7 | 50 | J | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Chloromethane | 40 | 21 | 150 | J | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Isopropylbenzene | 23 | 9.1 | 50 | J | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| n-Propylbenzene | 60 | 9.1 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Xylenes, Total | 650 | 19 | 75 | | µg/L | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 85.8 | 0 | 70-130 | | %Rec | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 94.3 | 0 | 70-130 | | %Rec | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Surr: Dibromofluoromethane | 88.2 | 0 | 70-130 | | %Rec | 50 | 3/25/2022 12:49:40 AM | R86734 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 50 | 3/25/2022 12:49:40 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 25 | 1.4 | 2.5 | | mg/L | 50 | 3/25/2022 12:49:40 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 70-130 | | %Rec | 50 | 3/25/2022 12:49:40 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 4:56:01 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.6 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 7:14:28 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.084 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 7:14:28 PM | 66385 |
| Surr: DNOP | 82.4 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 7:14:28 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | 4.6 | 4.5 | 10 | J | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Naphthalene | 29 | 2.2 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Phenol | 44 | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: 2-Fluorophenol | 58.9 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: Phenol-d5 | 47.3 | 0 | 28.5-64.7 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 91.0 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: Nitrobenzene-d5 | 76.2 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 64.4 | 0 | 38.1-99.9 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 88.9 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 11:01:05 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| 1-Methylnaphthalene | 20 | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| 2-Methylnaphthalene | 13 | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Acenaphthene | 0.38 | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Fluorene | 1.1 | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Phenanthrene | 0.84 | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 2:58:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.8 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 52.9 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 2:58:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 68.6 | 0 | 72.3-147 | S | %Rec | 1 | 3/30/2022 2:58:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.70 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Chromium | 0.0080 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Cobalt | 0.041 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Nickel | 0.24 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Vanadium | 0.023 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| Zinc | 0.039 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 3:17:19 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:45:25 PM | 66472 |
| Arsenic | 0.011 | 0.0013 | 0.010 | * | mg/L | 10 | 3/31/2022 3:42:42 PM | 66472 |
| Lead | 0.0082 | 0.00061 | 0.0050 | | mg/L | 10 | 3/31/2022 3:42:42 PM | 66472 |
| Selenium | ND | 0.0037 | 0.010 | | mg/L | 10 | 3/31/2022 3:42:42 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:37:41 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:10:00 AM

Lab ID: 2203C69-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.64 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Cobalt | 0.012 | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Nickel | 0.26 | 0.0033 | 0.010 | * | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Vanadium | 0.0039 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 2:09:14 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/24/2022 3:53:40 PM | B86714 |
| Arsenic | 0.0051 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 4:15:12 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 4:15:12 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 4:15:12 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:18:03 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.29 | 0.23 | 1.0 | J | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 110 | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,2-Dichloroethane (EDC) | 0.76 | 0.25 | 1.0 | J | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 88.5 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 95.0 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Surr: Dibromofluoromethane | 92.2 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:18:12 AM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:18:12 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.15 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 1:18:12 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:18:12 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 5:11:10 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.036 | 0.016 | 0.064 | J | mg/L | 1 | 3/28/2022 7:38:44 PM | 66385 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 7:38:44 PM | 66385 |
| Surr: DNOP | 110 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 7:38:44 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: 2-Fluorophenol | 30.6 | 0 | 29.4-87.7 | | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: Phenol-d5 | 24.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 39.3 | 0 | 18.6-129 | | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: Nitrobenzene-d5 | 42.7 | 0 | 36.9-103 | | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 34.9 | 0 | 38.1-99.9 | S | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 71.1 | 0 | 48-155 | | %Rec | 1 | 4/2/2022 11:42:55 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 3:42:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 46.8 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 41.7 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 3:42:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 82.5 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 3:42:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.020 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Vanadium | 0.0025 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 3:20:08 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:47:52 PM | 66472 |
| Arsenic | 0.00075 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/31/2022 1:47:52 PM | 66472 |
| Lead | 0.000067 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/31/2022 1:47:52 PM | 66472 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 1:47:52 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:39:50 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:30:00 AM

Lab ID: 2203C69-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.025 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Nickel | 0.0033 | 0.0033 | 0.010 | J | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| Zinc | 0.0084 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:12:02 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 2:59:47 PM | B86714 |
| Arsenic | 0.00074 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/24/2022 2:59:47 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 2:59:47 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 2:59:47 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:20:09 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:50:00 AM

Lab ID: 2203C69-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.91 | 0.23 | 1.0 | J | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 23 | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,2,4-Trimethylbenzene | 0.22 | 0.12 | 1.0 | J | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,2-Dichloroethane (EDC) | 6.6 | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Acetone | 17 | 2.5 | 10 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Chloromethane | 1.6 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,1-Dichloroethane | 0.58 | 0.27 | 1.0 | J | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 89.5 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Surr: Dibromofluoromethane | 94.6 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:46:41 AM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:46:41 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.50 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 1:46:41 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:46:41 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203C69-006B

Client Sample ID: OW-56

Collection Date: 3/23/2022 9:50:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 5:26:24 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:50:00 AM

Lab ID: 2203C69-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.1 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 8:03:03 PM | 66385 |
| Motor Oil Range Organics (MRO) | 0.24 | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 8:03:03 PM | 66385 |
| Surr: DNOP | 147 | 0 | 42.2-138 | S | %Rec | 1 | 3/28/2022 8:03:03 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: 2-Fluorophenol | 61.4 | 0 | 29.4-87.7 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: Phenol-d5 | 44.6 | 0 | 28.5-64.7 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: 2,4,6-Tribromophenol | 79.5 | 0 | 18.6-129 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: Nitrobenzene-d5 | 75.7 | 0 | 36.9-103 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: 2-Fluorobiphenyl | 64.4 | 0 | 38.1-99.9 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| Surr: 4-Terphenyl-d14 | 87.0 | 0 | 48-155 | | %Rec | 1 | 4/3/2022 12:24:45 AM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 4:26:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:50:00 AM

Lab ID: 2203C69-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.7 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 58.1 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 4:26:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 74.5 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 4:26:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:50:00 AM

Lab ID: 2203C69-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.45 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Cobalt | 0.0069 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Nickel | 0.072 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Vanadium | 0.0083 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| Zinc | 0.010 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 3:23:23 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:50:18 PM | 66472 |
| Arsenic | 0.0055 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:50:18 PM | 66472 |
| Lead | 0.0015 | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 1:50:18 PM | 66472 |
| Selenium | 0.00082 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/31/2022 1:50:18 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:41:59 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 9:50:00 AM

Lab ID: 2203C69-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.43 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Cobalt | 0.0074 | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Nickel | 0.083 | 0.0033 | 0.010 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Vanadium | 0.0033 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 2:15:17 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 3/24/2022 3:02:29 PM | B86714 |
| Arsenic | 0.0037 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 4:01:45 PM | B86714 |
| Lead | 0.00015 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/24/2022 4:01:45 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 4:01:45 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:22:17 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 11 | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Chloromethane | 0.66 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 87.9 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Surr: Dibromofluoromethane | 91.4 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:15:15 AM | R86734 |
| Surr: Toluene-d8 | 96.9 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:15:15 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 2.3 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 2:15:15 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:15:15 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/29/2022 5:41:41 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.49 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 8:27:10 PM | 66385 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 8:27:10 PM | 66385 |
| Surr: DNOP | 99.5 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 8:27:10 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: 2-Fluorophenol | 19.4 | 0 | 29.4-87.7 | S | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: Phenol-d5 | 34.9 | 0 | 28.5-64.7 | | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: 2,4,6-Tribromophenol | 6.62 | 0 | 18.6-129 | S | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: Nitrobenzene-d5 | 61.1 | 0 | 36.9-103 | | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: 2-Fluorobiphenyl | 54.1 | 0 | 38.1-99.9 | | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| Surr: 4-Terphenyl-d14 | 85.7 | 0 | 48-155 | | %Rec | 1 | 4/3/2022 1:06:16 AM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.8 | 0.048 | 1.0 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 5:11:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.0 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 51.9 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 5:11:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 84.5 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 5:11:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.099 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Chromium | 0.0028 | 0.0021 | 0.0060 | J | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Cobalt | 0.0043 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Nickel | 0.037 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Vanadium | 0.012 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| Zinc | 0.0064 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 3:26:15 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/31/2022 3:50:02 PM | 66472 |
| Arsenic | 0.0051 | 0.00063 | 0.0050 | | mg/L | 5 | 3/31/2022 3:50:02 PM | 66472 |
| Lead | 0.0020 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/31/2022 3:50:02 PM | 66472 |
| Selenium | 0.0020 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/31/2022 3:50:02 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/28/2022 3:44:07 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:10:00 AM

Lab ID: 2203C69-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.014 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Cobalt | 0.0050 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Nickel | 0.042 | 0.0033 | 0.010 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| Zinc | 0.0091 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:23:08 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 3/24/2022 3:05:10 PM | B86714 |
| Arsenic | 0.0047 | 0.0012 | 0.010 | J | mg/L | 10 | 3/24/2022 3:05:10 PM | B86714 |
| Lead | 0.00061 | 0.00057 | 0.0050 | J | mg/L | 10 | 3/24/2022 3:05:10 PM | B86714 |
| Selenium | ND | 0.0034 | 0.010 | | mg/L | 10 | 3/24/2022 3:05:10 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:24:26 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 88.1 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Surr: Dibromofluoromethane | 89.7 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:43:47 AM | R86734 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:43:47 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.066 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 2:43:47 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 2:43:47 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 5:56:56 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.092 | 0.016 | 0.064 | | mg/L | 1 | 3/28/2022 9:15:44 PM | 66385 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/28/2022 9:15:44 PM | 66385 |
| Surr: DNOP | 98.4 | 0 | 42.2-138 | | %Rec | 1 | 3/28/2022 9:15:44 PM | 66385 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: 2-Fluorophenol | 49.5 | 0 | 29.4-87.7 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: Phenol-d5 | 39.0 | 0 | 28.5-64.7 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: 2,4,6-Tribromophenol | 54.6 | 0 | 18.6-129 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: Nitrobenzene-d5 | 64.7 | 0 | 36.9-103 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: 2-Fluorobiphenyl | 58.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| Surr: 4-Terphenyl-d14 | 75.6 | 0 | 48-155 | | %Rec | 1 | 4/3/2022 1:47:48 AM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.24 | 0.048 | 1.0 | J | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/30/2022 5:56:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.8 | 0 | 31.6-100 | | %Rec | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Surr: 2-Fluorobiphenyl | 58.3 | 0 | 26.7-90.1 | | %Rec | 1 | 3/30/2022 5:56:00 PM | R86913 |
| Surr: 4-Terphenyl-d14 | 82.5 | 0 | 72.3-147 | | %Rec | 1 | 3/30/2022 5:56:00 PM | R86913 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 1.3 | 0.0082 | 0.015 | | mg/L | 5 | 4/6/2022 3:35:31 PM | 66644 |
| Beryllium | 0.0026 | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Chromium | 0.080 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Cobalt | 0.019 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Nickel | 0.084 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Vanadium | 0.084 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| Zinc | 0.064 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 3:34:06 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:55:11 PM | 66472 |
| Arsenic | 0.0061 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:55:11 PM | 66472 |
| Lead | 0.022 | 0.00031 | 0.0025 | * | mg/L | 5 | 3/31/2022 3:52:28 PM | 66472 |
| Selenium | 0.023 | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 1:55:11 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:46:17 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 10:30:00 AM

Lab ID: 2203C69-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.035 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Chromium | 0.0044 | 0.0020 | 0.0060 | J | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Cobalt | 0.0027 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Nickel | 0.012 | 0.0033 | 0.010 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Vanadium | 0.011 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 2:28:01 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/24/2022 3:07:51 PM | B86714 |
| Arsenic | 0.0013 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/24/2022 4:07:08 PM | B86714 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 3:07:51 PM | B86714 |
| Selenium | 0.021 | 0.0017 | 0.0050 | | mg/L | 5 | 3/24/2022 4:07:08 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:26:34 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 11:00:00 AM

Lab ID: 2203C69-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 160 | 2.3 | 10 | | µg/L | 10 | 3/25/2022 11:59:44 AM | R86760 |
| Toluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Ethylbenzene | 31 | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 3.3 | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,2,4-Trimethylbenzene | 22 | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,3,5-Trimethylbenzene | 0.61 | 0.18 | 1.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Chloromethane | 0.78 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,1-Dichloroethane | 4.4 | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Isopropylbenzene | 1.6 | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 4-Isopropyltoluene | 0.21 | 0.20 | 1.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| n-Butylbenzene | 0.29 | 0.25 | 3.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| n-Propylbenzene | 3.0 | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| 1,1,1-Trichloroethane | 0.61 | 0.30 | 1.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Vinyl chloride | 0.65 | 0.32 | 1.0 | J | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Xylenes, Total | 6.7 | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 86.3 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 90.1 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Surr: Dibromofluoromethane | 87.2 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:12:15 AM | R86734 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:12:15 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.80 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 3:12:15 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 93.5 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:12:15 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203C69-009B

Client Sample ID: MKTF-16

Collection Date: 3/23/2022 11:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 6:12:09 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 11:00:00 AM

Lab ID: 2203C69-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 4.8 | 91 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 20 | 45 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Di-n-butyl phthalate | ND | 29 | 45 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Di-n-octyl phthalate | ND | 14 | 91 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 3.2 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Diethyl phthalate | ND | 18 | 45 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Dimethyl phthalate | ND | 9.1 | 45 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 2,4-Dimethylphenol | ND | 4.4 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 2,4-Dinitrophenol | ND | 2.3 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 2-Methylphenol | ND | 2.3 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 3+4-Methylphenol | ND | 2.1 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Phenol | ND | 1.5 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Pyridine | ND | 45 | 45 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 2.0 | 23 | | µg/L | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: 2-Fluorophenol | 40.3 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: Phenol-d5 | 30.8 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 63.3 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: Nitrobenzene-d5 | 48.6 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 48.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 86.4 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 12:18:52 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Naphthalene | 0.080 | 0.034 | 0.10 | J | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Surr: Nitrobenzene-d5 | 51.1 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Surr: 2-Fluorobiphenyl | 51.1 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 11:52:00 AM | R87058 |
| Surr: 4-Terphenyl-d14 | 93.3 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 11:52:00 AM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 12 | 0.23 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Toluene | 0.36 | 0.20 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Ethylbenzene | 13 | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Methyl tert-butyl ether (MTBE) | 1200 | 3.9 | 10 | | µg/L | 10 | 3/25/2022 12:28:47 PM | R86760 |
| 1,2,4-Trimethylbenzene | 4.5 | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 1,2-Dichloroethane (EDC) | 0.68 | 0.25 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Chloromethane | 1.8 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 1,1-Dichloroethane | 0.63 | 0.27 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Isopropylbenzene | 0.46 | 0.18 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| n-Propylbenzene | 1.2 | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| sec-Butylbenzene | 0.58 | 0.14 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Vinyl chloride | 0.46 | 0.32 | 1.0 | J | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Xylenes, Total | 2.4 | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Surr: 1,2-Dichloroethane-d4 | 87.2 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Surr: Dibromofluoromethane | 87.7 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:40:42 AM | R86734 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:40:42 AM | R86734 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 1.9 | 0.028 | 0.050 | | mg/L | 1 | 3/25/2022 3:40:42 AM | G86734 |
| Surr: 4-Bromofluorobenzene | 109 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 3:40:42 AM | G86734 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/29/2022 6:27:22 PM | 66393 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.3 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 12:05:25 AM | 66409 |
| Motor Oil Range Organics (MRO) | 0.16 | 0.052 | 0.080 | B | mg/L | 1 | 3/29/2022 12:05:25 AM | 66409 |
| Surr: DNOP | 96.6 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 12:05:25 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: 2-Fluorophenol | 42.4 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: Phenol-d5 | 32.1 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: 2,4,6-Tribromophenol | 65.6 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: Nitrobenzene-d5 | 53.7 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| Surr: 4-Terphenyl-d14 | 83.7 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 1:00:17 PM | 66392 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 12:35:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.3 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 56.7 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 12:35:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 107 | 0 | 72.3-147 | E | %Rec | 1 | 4/6/2022 12:35:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.41 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Chromium | 0.0053 | 0.0021 | 0.0060 | J | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Cobalt | 0.081 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Nickel | 0.26 | 0.0033 | 0.010 | * | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Vanadium | 0.015 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| Zinc | 0.026 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:57:56 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 1:57:38 PM | 66472 |
| Arsenic | 0.0091 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 1:57:38 PM | 66472 |
| Lead | 0.020 | 0.000061 | 0.00050 | * | mg/L | 1 | 3/31/2022 1:57:38 PM | 66472 |
| Selenium | 0.00086 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/31/2022 1:57:38 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:48:25 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022

Lab ID: 2203C69-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.20 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Cobalt | 0.085 | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Nickel | 0.27 | 0.0033 | 0.010 | * | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| Zinc | 0.018 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 2:34:33 PM | B86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00051 | 0.00044 | 0.0010 | J | mg/L | 1 | 3/24/2022 3:10:32 PM | B86714 |
| Arsenic | 0.0091 | 0.00012 | 0.0010 | | mg/L | 1 | 3/24/2022 3:10:32 PM | B86714 |
| Lead | 0.0076 | 0.000057 | 0.00050 | | mg/L | 1 | 3/24/2022 3:10:32 PM | B86714 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/24/2022 3:10:32 PM | B86714 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:28:43 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-3-23-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/23/2022 11:00:00 AM

Lab ID: 2203C69-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 2-Butanone | 5.2 | 2.0 | 10 | J | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Chloromethane | 0.80 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Surr: 1,2-Dichloroethane-d4 | 90.7 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Surr: Dibromofluoromethane | 97.1 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 12:57:16 PM | R86760 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 12:57:16 PM | R86760 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203C69-012A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Chloromethane | 0.69 | 0.41 | 3.0 | J | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Surr: 1,2-Dichloroethane-d4 | 83.4 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Surr: 4-Bromofluorobenzene | 97.2 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Surr: Dibromofluoromethane | 92.2 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:25:53 PM | R86760 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/25/2022 1:25:53 PM | R86760 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203C69

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203C69-012B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/29/2022 6:42:39 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

April 04, 2022

Hall Environmental Analysis Laboratory

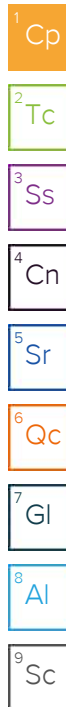
Sample Delivery Group: L1475080

Samples Received: 03/25/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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2203C69-001F EB-3-23-22 L1475080-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:21 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 08:20
03/25/22 09:00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203C69-002F OW-54 L1475080-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:26 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 08:20
03/25/22 09:00

2203C69-003F OW-66 L1475080-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:27 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 08:50
03/25/22 09:00

2203C69-004F OW-55 L1475080-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:28 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 09:10
03/25/22 09:00

2203C69-005F OW-13 L1475080-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:29 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 09:30
03/25/22 09:00

2203C69-006F OW-56 L1475080-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:32 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 09:50
03/25/22 09:00

2203C69-007F OW-59 L1475080-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:35 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 10:10
03/25/22 09:00

2203C69-008F OW-60 L1475080-08 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:36 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

03/23/22 10:30
03/25/22 09:00

2203C69-010F DUP-3-23-22 L1475080-09 WW

Collected by
Collected date/time
Received date/time

03/23/22 00:00 03/25/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1839312 | 1 | 03/28/22 15:55 | 04/01/22 13:39 | LDT | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J3 J6 | 0.00500 | 1 | 04/01/2022 13:21 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00527 | | 0.00500 | 1 | 04/01/2022 13:26 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00756 | | 0.00500 | 1 | 04/01/2022 13:27 | WG1839312 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/01/2022 13:28 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/23/22 09:30

L1475080

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/01/2022 13:29 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J3 J6 | 0.00500 | 1 | 04/01/2022 13:32 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0191 | | 0.00500 | 1 | 04/01/2022 13:35 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00928 | | 0.00500 | 1 | 04/01/2022 13:36 | WG1839312 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 03/23/22 00:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/01/2022 13:39 | WG1839312 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3776612-1 04/01/22 13:14

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1474926-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1474926-08 04/01/22 13:18 • (DUP) R3776612-3 04/01/22 13:19

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1475080-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1475080-05 04/01/22 13:29 • (DUP) R3776612-6 04/01/22 13:30

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3776612-2 04/01/22 13:15

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1475080-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1475080-01 04/01/22 13:21 • (MS) R3776612-4 04/01/22 13:22 • (MSD) R3776612-5 04/01/22 13:23

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0973 | 0.0284 | 97.3 | 28.4 | 1 | 90.0-110 | | J3 J6 | 110 | 20 |

L1475080-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1475080-06 04/01/22 13:32 • (MS) R3776612-7 04/01/22 13:33 • (MSD) R3776612-8 04/01/22 13:34

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.104 | 0.0773 | 99.8 | 73.1 | 1 | 90.0-110 | | J3 J6 | 29.5 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

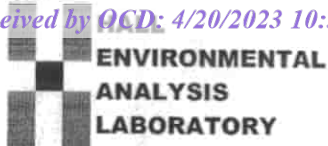
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

1084

| | | | | | | | |
|--|--|------------------|--|-----------------------|--|---------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|---------------------|
| 1 | 2203C69-001F | EB-3-23-22 | 500AMBHDP | Groundw | 3/23/2022 8:20:00 AM | 1 | Total Cyanide |
| 2 | 2203C69-002F | OW-54 | 500AMBHDP | Groundw | 3/23/2022 8:20:00 AM | 1 | Total Cyanide |
| 3 | 2203C69-003F | OW-66 | 500AMBHDP | Groundw | 3/23/2022 8:50:00 AM | 1 | Total Cyanide |
| 4 | 2203C69-004F | OW-55 | 500AMBHDP | Groundw | 3/23/2022 9:10:00 AM | 1 | Total Cyanide |
| 5 | 2203C69-005F | OW-13 | 500AMBHDP | Groundw | 3/23/2022 9:30:00 AM | 1 | Total Cyanide |
| 6 | 2203C69-006F | OW-56 | 500AMBHDP | Groundw | 3/23/2022 9:50:00 AM | 1 | Total Cyanide |
| 7 | 2203C69-007F | OW-59 | 500AMBHDP | Groundw | 3/23/2022 10:10:00 AM | 1 | Total Cyanide |
| 8 | 2203C69-008F | OW-60 | 500AMBHDP | Groundw | 3/23/2022 10:30:00 AM | 1 | Total Cyanide |
| 9 | 2203C69-010F | DUP-3-23-22 | 500AMBHDP | Groundw | 3/23/2022 | 1 | Total Cyanide |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Feix: 5528 5947 9180

Temp: 2.7 ± 0.2

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-----------------|----------------|--------------------------|---------------|-------------|--|--|
| Relinquished By: CMC | Date: 3/24/2022 | Time: 11:44 AM | Received By: [Signature] | Date: 3/24/22 | Time: 09:01 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066297 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066299 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0023 | 0.0030 | 0.002000 | 0 | 116 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.4 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 126 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 99.3 | 50 | 150 | | | J |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 97.1 | 50 | 150 | | | J |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 114 | 50 | 150 | | | J |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 120 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066301 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-66644 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075590 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LLCS-66644 | | SampType: LCSLL | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: BatchQC | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075594 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 95.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.6 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 99.1 | 50 | 150 | | | J |
| Cobalt | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 67.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.3 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-66644 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075595 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.3 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.7 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2203C69-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-54 | | Batch ID: 66644 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076461 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.89 | 0.0030 | 0.5000 | 0.3878 | 99.5 | 70 | 130 | | | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.4 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0.006400 | 96.9 | 70 | 130 | | | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0.07790 | 93.1 | 70 | 130 | | | |
| Nickel | 0.71 | 0.010 | 0.5000 | 0.2417 | 93.4 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0.01525 | 104 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.03055 | 96.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|-------|----------|------|
| Sample ID: 2203C69-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-54 | | Batch ID: 66644 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076462 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.90 | 0.0030 | 0.5000 | 0.3878 | 103 | 70 | 130 | 1.98 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | 0.543 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.6 | 70 | 130 | 1.26 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0.006400 | 96.5 | 70 | 130 | 0.413 | 20 | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0.07790 | 93.3 | 70 | 130 | 0.237 | 20 | |
| Nickel | 0.71 | 0.010 | 0.5000 | 0.2417 | 94.0 | 70 | 130 | 0.397 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 70 | 130 | 3.08 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0.01525 | 104 | 70 | 130 | 0.651 | 20 | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.03055 | 95.9 | 70 | 130 | 0.514 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2203C69-003DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-66 | | Batch ID: 66644 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076467 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Cadmium | 0.45 | 0.0020 | 0.5000 | 0 | 91.0 | 70 | 130 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0.01693 | 92.7 | 70 | 130 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0.009463 | 88.9 | 70 | 130 | | | |
| Nickel | 0.76 | 0.010 | 0.5000 | 0.3258 | 86.5 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0.03359 | 99.8 | 70 | 130 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.02264 | 91.8 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|--------|----------|------|
| Sample ID: 2203C69-003DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-66 | | Batch ID: 66644 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076468 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | 0.319 | 20 | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 91.1 | 70 | 130 | 0.196 | 20 | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0.01693 | 93.1 | 70 | 130 | 0.377 | 20 | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0.009463 | 88.6 | 70 | 130 | 0.366 | 20 | |
| Nickel | 0.76 | 0.010 | 0.5000 | 0.3258 | 86.2 | 70 | 130 | 0.210 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.8 | 70 | 130 | 0.912 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0.03359 | 100 | 70 | 130 | 0.596 | 20 | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.02264 | 91.7 | 70 | 130 | 0.0940 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203C69-003DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-66 | | Batch ID: 66644 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076473 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 2.7 | 0.015 | 0.5000 | 2.257 | 96.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|-------------------------|---------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203C69-003DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-66 | Batch ID: 66644 | | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | | | SeqNo: 3076474 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 2.8 | 0.015 | 0.5000 | 2.257 | 99.8 | 70 | 130 | 0.652 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066298 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066300 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0023 | 0.0020 | 0.002000 | 0 | 116 | 50 | 150 | | | |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.4 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 126 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 99.3 | 50 | 150 | | | J |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 97.1 | 50 | 150 | | | J |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 114 | 50 | 150 | | | J |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 120 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066302 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66472 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66472 | RunNo: 86921 |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071013 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66472 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66472 | RunNo: 86921 |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071014 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0010 | 0.0010 0.001000 0 102 50 150 |
| Arsenic | 0.00095 | 0.0010 0.001000 0 95.5 50 150 J |
| Lead | 0.00048 | 0.00050 0.0005000 0 96.9 50 150 J |
| Selenium | 0.00085 | 0.0010 0.001000 0 84.6 50 150 J |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66472 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66472 | RunNo: 86921 |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071015 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.025 | 0.0010 0.02500 0 101 85 115 |
| Arsenic | 0.025 | 0.0010 0.02500 0 99.4 85 115 |
| Lead | 0.012 | 0.00050 0.01250 0 99.0 85 115 |
| Selenium | 0.025 | 0.0010 0.02500 0 101 85 115 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2203C69-001DMSLL | SampType: MS | TestCode: EPA 200.8: Metals |
| Client ID: EB-3-23-22 | Batch ID: 66472 | RunNo: 86921 |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071068 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.026 | 0.0010 0.02500 0 103 70 130 |
| Arsenic | 0.025 | 0.0010 0.02500 0 102 70 130 |
| Lead | 0.012 | 0.00050 0.01250 0 99.9 70 130 |
| Selenium | 0.024 | 0.0010 0.02500 0 97.8 70 130 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062323 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062324 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Selenium | 0.00080 | 0.0010 | 0.001000 | 0 | 80.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86714 | RunNo: 86714 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062325 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66425 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064662 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|------------------------|--------------------------|--|
| Sample ID: LCSLL-66425 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064663 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00016 | 0.00020 0.0001500 0 107 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66425 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064664 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.0 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2203C69-001DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-3-23-22 | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064670 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0048 | 0.00020 0.005000 0 95.6 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2203C69-001DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-3-23-22 | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064671 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.4 75 125 2.89 20 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66456 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66456 | RunNo: 86816 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3065977 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-66456 | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | Batch ID: 66456 | | RunNo: 86816 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | | SeqNo: 3065978 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00015 | 0.00020 | 0.0001500 | 0 | 101 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66456 | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: LCSW | Batch ID: 66456 | | RunNo: 86816 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | | SeqNo: 3065979 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0049 | 0.00020 | 0.005000 | 0 | 97.1 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66393 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066617 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66394 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066618 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66394 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066619 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66393 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066620 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66393 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66393 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066625 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 112 70 130 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66394 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066626 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 116 70 130 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|--------------------|----------|-----------|-------|----------|------|
| Sample ID: LCSD-66394 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 66394 | | | RunNo: 86828 | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | | | SeqNo: 3066627 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 117 | 70 | 130 | 0.511 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-66385 | SampType: MBLK | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: PBW | Batch ID: 66385 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065860 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.044 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.041 | | 0.03750 | | 110 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-66385 | SampType: LCS | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSW | Batch ID: 66385 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065861 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.20 | 0.064 | 0.1875 | 0 | 107 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.028 | | 0.01875 | | 148 | 42.2 | 138 | | | S |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-66385 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 66385 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/24/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065862 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 59.4 | 31.7 | 75.4 | 56.8 | 20 | R |
| Surr: DNOP | 0.019 | | 0.01875 | | 104 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-66409 | SampType: MBLK | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: PBW | Batch ID: 66409 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065883 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.040 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | 0.099 | 0.080 | | | | | | | | |
| Surr: DNOP | 0.035 | | 0.03750 | | 94.4 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-66409 | SampType: LCS | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSW | Batch ID: 66409 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065884 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.098 | 0.064 | 0.1875 | 0 | 52.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-66409 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 66409 | | | RunNo: 86806 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | | | SeqNo: 3065885 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | 0.1875 | 0 | 56.0 | 31.7 | 75.4 | 6.85 | 20 | |
| Surr: DNOP | 0.020 | | 0.01875 | | 106 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062248 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.5 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 97.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 88.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 92.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062277 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86734 | RunNo: 86734 | | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | SeqNo: 3062277 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 87.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86760 | RunNo: 86760 | | | | | | | | |
| Prep Date: | Analysis Date: 3/25/2022 | SeqNo: 3063673 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 17 | 1.0 | 20.00 | 0 | 85.1 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.3 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 81.4 | 70 | 130 | | | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 77.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.3 | | 10.00 | | 83.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.9 | | 10.00 | | 89.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.9 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|--------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86760 | RunNo: 86760 | | | | | | | | |
| Prep Date: | Analysis Date: 3/25/2022 | SeqNo: 3063681 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86760 | | | RunNo: 86760 | | | | | | |
| Prep Date: | Analysis Date: 3/25/2022 | | | SeqNo: 3063681 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | 0.87 | 10 | | | | | | | | J |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.69 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | 0.34 | 1.0 | | | | | | | | J |
| Vinyl chloride | 0.47 | 1.0 | | | | | | | | J |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 86.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 107 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66392 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66392 | | | RunNo: 86931 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 4/2/2022 | | | SeqNo: 3071648 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 58.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 89 | | 200.0 | | 44.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 74.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 69.7 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.1 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 81 | | 100.0 | | 80.6 | 48 | 155 | | | |

| Sample ID: LCS-66392 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66392 | | | RunNo: 86931 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 4/2/2022 | | | SeqNo: 3071649 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 48 | 5.0 | 100.0 | 0 | 48.2 | 15 | 87.6 | | | |
| Phenol | 70 | 5.0 | 200.0 | 0 | 35.1 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.3 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 71 | | 200.0 | | 35.6 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 75.3 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 53.8 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.1 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: LCSD-66392 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66392 | | | RunNo: 86931 | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 4/2/2022 | | | SeqNo: 3071650 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 58 | 5.0 | 100.0 | 0 | 58.2 | 15 | 87.6 | 18.9 | 30.4 | |
| Phenol | 82 | 5.0 | 200.0 | 0 | 41.0 | 16.8 | 70.5 | 15.4 | 37.2 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 55.0 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 83 | | 200.0 | | 41.4 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 81.7 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.2 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.4 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 99 | | 100.0 | | 98.6 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66392 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86913 | RunNo: 86913 | | | | | | | | |
| Prep Date: | Analysis Date: 3/30/2022 | SeqNo: 3070657 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 87 | | 200.0 | | 43.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.2 | 72.3 | 147 | | | |

| Sample ID: lcs-66392-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86913 | RunNo: 86913 | | | | | | | | |
| Prep Date: | Analysis Date: 3/30/2022 | SeqNo: 3070659 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.2 | 0.10 | 2.000 | 0 | 59.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 67.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.6 | 0.10 | 2.000 | 0 | 78.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.20 | 2.000 | 0 | 99.0 | 52.9 | 123 | | | |
| Pyrene | 1.9 | 0.20 | 2.000 | 0 | 93.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.4 | 0.10 | 2.000 | 0 | 121 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 91.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.3 | 0.10 | 2.000 | 0 | 114 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 3.0 | 0.30 | 2.000 | 0 | 150 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.8 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66392-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R86913 | | RunNo: 86913 | | | | | | | |
| Prep Date: | Analysis Date: 3/30/2022 | | SeqNo: 3070659 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 92 | | 200.0 | | 45.9 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 62.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 85.7 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66392-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R86913 | | RunNo: 86913 | | | | | | | |
| Prep Date: | Analysis Date: 3/30/2022 | | SeqNo: 3070662 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.74 | 0.10 | 2.000 | 0 | 37.0 | 20.2 | 48.4 | 5.56 | 30.1 | |
| Naphthalene | 1.2 | 0.10 | 2.000 | 0 | 62.0 | 21.3 | 79.9 | 6.67 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 6.45 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 20.6 | 80.1 | 8.13 | 25 | |
| Acenaphthene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 29.8 | 82.7 | 8.57 | 27.8 | |
| Fluorene | 1.6 | 0.10 | 2.000 | 0 | 80.0 | 33.3 | 86 | 7.79 | 26.4 | |
| Phenanthrene | 1.7 | 0.10 | 2.000 | 0 | 83.0 | 38.2 | 93.9 | 6.21 | 27.9 | |
| Anthracene | 1.8 | 0.10 | 2.000 | 0 | 92.0 | 41.1 | 95.6 | 6.74 | 25.6 | |
| Fluoranthene | 2.1 | 0.20 | 2.000 | 0 | 106 | 52.9 | 123 | 6.83 | 22.8 | |
| Pyrene | 1.9 | 0.20 | 2.000 | 0 | 96.0 | 51 | 113 | 3.17 | 20 | |
| Benz(a)anthracene | 2.5 | 0.10 | 2.000 | 0 | 125 | 51 | 147 | 3.25 | 24.1 | |
| Chrysene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 55.3 | 115 | 4.30 | 20 | |
| Benzo(b)fluoranthene | 2.4 | 0.10 | 2.000 | 0 | 120 | 44.4 | 136 | 5.13 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 3.1 | 0.30 | 2.000 | 0 | 155 | 31.4 | 165 | 3.28 | 21.1 | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 70.4 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 93 | | 200.0 | | 46.7 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.5 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.4 | 72.3 | 147 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66423 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: R87058 | | RunNo: 87058 | | | | | | | |
| Prep Date: | Analysis Date: 4/6/2022 | | SeqNo: 3076829 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: mb-66423 | | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: PBW | | Batch ID: R87058 | | | RunNo: 87058 | | | | | |
| Prep Date: | | Analysis Date: 4/6/2022 | | | SeqNo: 3076829 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | 0.16 | 0.20 | | | | | | | | J |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 86 | | 200.0 | | 43.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 113 | 72.3 | 147 | | | E |

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: lcs-66423-lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: R87058 | | RunNo: 87058 | | | | | | |
| Prep Date: | | Analysis Date: 4/6/2022 | | SeqNo: 3076830 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 0.10 | 2.000 | 0 | 34.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 55.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.10 | 2.000 | 0 | 91.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.9 | 0.10 | 2.000 | 0 | 93.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.3 | 0.20 | 2.000 | 0 | 113 | 52.9 | 123 | | | |
| Pyrene | 2.0 | 0.20 | 2.000 | 0 | 101 | 51 | 113 | | | |
| Benz(a)anthracene | 2.4 | 0.10 | 2.000 | 0 | 121 | 51 | 147 | | | |
| Chrysene | 2.1 | 0.10 | 2.000 | 0 | 106 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.4 | 0.10 | 2.000 | 0 | 119 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 127 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 60 | | 102.0 | | 58.6 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 91 | | 202.0 | | 45.1 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 102.0 | | 58.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 102.0 | | 106 | 72.3 | 147 | | | E |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: Icsd-66423-If | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: R87058 | | | RunNo: 87058 | | | | | | |
| Prep Date: | Analysis Date: 4/6/2022 | | | SeqNo: 3076831 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.58 | 0.10 | 2.000 | 0 | 29.0 | 20.2 | 48.4 | 15.9 | 30.1 | |
| Naphthalene | 0.90 | 0.10 | 2.000 | 0 | 45.0 | 21.3 | 79.9 | 20.0 | 25.6 | |
| 1-Methylnaphthalene | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 22.2 | 80.3 | 17.5 | 25 | |
| 2-Methylnaphthalene | 0.96 | 0.10 | 2.000 | 0 | 48.0 | 20.6 | 80.1 | 17.1 | 25 | |
| Acenaphthene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 29.8 | 82.7 | 18.8 | 27.8 | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 33.3 | 86 | 19.5 | 26.4 | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 67.0 | 38.2 | 93.9 | 30.4 | 27.9 | R |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 41.1 | 95.6 | 22.8 | 25.6 | |
| Fluoranthene | 1.9 | 0.20 | 2.000 | 0 | 94.0 | 52.9 | 123 | 18.4 | 22.8 | |
| Pyrene | 1.5 | 0.20 | 2.000 | 0 | 75.0 | 51 | 113 | 29.5 | 20 | R |
| Benz(a)anthracene | 1.9 | 0.10 | 2.000 | 0 | 93.0 | 51 | 147 | 26.2 | 24.1 | R |
| Chrysene | 1.5 | 0.10 | 2.000 | 0 | 76.0 | 55.3 | 115 | 33.0 | 20 | R |
| Benzo(b)fluoranthene | 1.7 | 0.10 | 2.000 | 0 | 84.0 | 44.4 | 136 | 34.5 | 24.5 | R |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 31.4 | 165 | 35.2 | 21.1 | R |
| Surr: Nitrobenzene-d5 | 58 | | 102.0 | | 57.3 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 80 | | 102.0 | | 78.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 56 | | 202.0 | | 27.7 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 89.6 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203C69

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

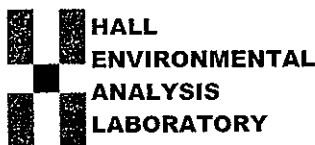
| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062281 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86734 | | RunNo: 86734 | | | | | | | |
| Prep Date: | Analysis Date: 3/24/2022 | | SeqNo: 3062303 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.041 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203C69

RcptNo: 1

Received By: Cheyenne Cason

3/24/2022 7:30:00 AM

Chad

Completed By: Cheyenne Cason

3/24/2022 8:10:21 AM

*Chad*Reviewed By: *SC 3/24/22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ *3/24/22* NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: *10 - 9*
(<2 or >12 unless noted)

Adjusted? *yes*Checked by: *TMC 3/24/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: *Added 400ml of HNO3 to sample 0030 for proper pH - see mtr/22*17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.3 | Good | Yes | | | |
| 2 | 0.7 | Good | Yes | | | |
| 3 | 0.3 | Good | Yes | | | |
| 4 | 1.1 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203D54

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 3/25/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 13, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203D54
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

"S" flagged denote that the surrogate recoveries are outside of the standard limits due to matrix interferences/sample dilution.

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:30:00 AM

Lab ID: 2203D54-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 3:34:00 PM | A86911 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 4/1/2022 3:34:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 2-Butanone | 9.2 | 2.0 | 10 | J | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Surr: 1,2-Dichloroethane-d4 | 96.3 | 0 | 70-130 | | %Rec | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Surr: 4-Bromofluorobenzene | 99.6 | 0 | 70-130 | | %Rec | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Surr: Dibromofluoromethane | 93.0 | 0 | 70-130 | | %Rec | 1 | 4/5/2022 4:45:09 PM | A87014 |
| Surr: Toluene-d8 | 94.5 | 0 | 70-130 | | %Rec | 1 | 4/5/2022 4:45:09 PM | A87014 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203D54-001B

Client Sample ID: EB-3-24-22

Collection Date: 3/24/2022 8:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 5:01:58 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:30:00 AM

Lab ID: 2203D54-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.027 | 0.016 | 0.064 | J | mg/L | 1 | 3/29/2022 12:29:36 AM | 66409 |
| Motor Oil Range Organics (MRO) | 0.090 | 0.052 | 0.080 | B | mg/L | 1 | 3/29/2022 12:29:36 AM | 66409 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 12:29:36 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: 2-Fluorophenol | 49.6 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: Phenol-d5 | 38.2 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 61.0 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: Nitrobenzene-d5 | 61.3 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 88.5 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 2:23:52 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 3:26:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:30:00 AM

Lab ID: 2203D54-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.1 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 62.6 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 3:26:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 117 | 0 | 72.3-147 | E | %Rec | 1 | 4/6/2022 3:26:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:30:00 AM

Lab ID: 2203D54-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:31:07 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:04:59 PM | 66472 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 2:04:59 PM | 66472 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 2:04:59 PM | 66472 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:04:59 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:50:32 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:30:00 AM

Lab ID: 2203D54-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:10:03 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| Zinc | 0.0071 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:54:08 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:43:32 PM | B86786 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/28/2022 1:43:32 PM | B86786 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:43:32 PM | B86786 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:43:32 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:50:07 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 1.4 | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 4:33:00 PM | A86911 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 4/1/2022 4:33:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Toluene | 0.20 | 0.20 | 1.0 | J | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | 1400 | 20 | 50 | | µg/L | 50 | 4/4/2022 7:12:27 PM | A86972 |
| 1,2,4-Trimethylbenzene | 0.54 | 0.12 | 1.0 | J | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Acetone | 3.1 | 2.5 | 10 | J | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Xylenes, Total | 0.85 | 0.37 | 1.5 | J | µg/L | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 99.0 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 6:41:44 AM | A86942 |
| Surr: Toluene-d8 | 98.7 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 6:41:44 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 5:32:13 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.74 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 12:53:47 AM | 66409 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | B | mg/L | 1 | 3/29/2022 12:53:47 AM | 66409 |
| Surr: DNOP | 94.7 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 12:53:47 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: 2-Fluorophenol | 42.2 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: Phenol-d5 | 34.2 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 58.7 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: Nitrobenzene-d5 | 50.8 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 49.3 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 69.3 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 3:05:37 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 4:09:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 58.4 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 52.5 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 4:09:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 76.9 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 4:09:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Cobalt | 0.0042 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Nickel | 0.082 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:34:19 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:07:25 PM | 66472 |
| Arsenic | 0.00066 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/31/2022 2:07:25 PM | 66472 |
| Lead | 0.00087 | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 2:07:25 PM | 66472 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:07:25 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:52:40 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 8:55:00 AM

Lab ID: 2203D54-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.16 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Cobalt | 0.0046 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Nickel | 0.085 | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:11:41 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| Zinc | 0.0052 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:49:38 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:46:12 PM | B86786 |
| Arsenic | 0.00084 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/28/2022 1:46:12 PM | B86786 |
| Lead | 0.00053 | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:46:12 PM | B86786 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:46:12 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:52:15 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.66 | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 4:53:00 PM | A86911 |
| Surr: BFB | 317 | 0 | 70-130 | S | %Rec | 1 | 4/1/2022 4:53:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 12 | 0.23 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Toluene | 0.22 | 0.20 | 1.0 | J | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Ethylbenzene | 21 | 0.21 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,2,4-Trimethylbenzene | 48 | 0.12 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,3,5-Trimethylbenzene | 1.8 | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Acetone | 4.4 | 2.5 | 10 | J | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Chloroform | 0.47 | 0.13 | 1.0 | J | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Isopropylbenzene | 6.3 | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 4-Isopropyltoluene | 0.30 | 0.20 | 1.0 | J | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| n-Butylbenzene | 0.98 | 0.25 | 3.0 | J | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| n-Propylbenzene | 3.6 | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| sec-Butylbenzene | 2.3 | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Xylenes, Total | 9.7 | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 94.6 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Surr: Dibromofluoromethane | 99.1 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:08:34 AM | A86942 |
| Surr: Toluene-d8 | 97.1 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:08:34 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 6:02:31 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.54 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 1:17:56 AM | 66409 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/29/2022 1:17:56 AM | 66409 |
| Surr: DNOP | 95.7 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 1:17:56 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: 2-Fluorophenol | 42.1 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: Phenol-d5 | 30.4 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 77.6 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: Nitrobenzene-d5 | 52.2 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 45.8 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 81.3 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 3:47:02 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Naphthalene | 1.4 | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| 1-Methylnaphthalene | 1.2 | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| 2-Methylnaphthalene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Acenaphthene | 0.12 | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Fluorene | 0.32 | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Phenanthrene | 0.94 | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Anthracene | 0.30 | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Fluoranthene | 0.80 | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Pyrene | 0.44 | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 4:53:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 53.5 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 45.5 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 4:53:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 76.0 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 4:53:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.32 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Vanadium | 0.0061 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:37:39 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:09:52 PM | 66472 |
| Arsenic | 0.0023 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 2:09:52 PM | 66472 |
| Lead | 0.00065 | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 2:09:52 PM | 66472 |
| Selenium | 0.00039 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/31/2022 2:09:52 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 3:59:03 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:30:00 AM

Lab ID: 2203D54-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.33 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:13:23 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Vanadium | 0.0035 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| Zinc | 0.0081 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 2:48:00 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:48:52 PM | B86786 |
| Arsenic | 0.0024 | 0.00012 | 0.0010 | | mg/L | 1 | 3/28/2022 1:48:52 PM | B86786 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:48:52 PM | B86786 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:48:52 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:54:23 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:30:00 AM

Lab ID: 2203D54-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 61 | 0.46 | 1.0 | | mg/L | 20 | 4/2/2022 4:22:00 PM | B86939 |
| Surr: BFB | 113 | 0 | 70-130 | | %Rec | 20 | 4/2/2022 4:22:00 PM | B86939 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 22000 | 230 | 1000 | | µg/L | 1E+ | 4/5/2022 1:35:15 PM | A87014 |
| Toluene | 4.2 | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Ethylbenzene | 970 | 11 | 50 | | µg/L | 50 | 4/4/2022 7:39:23 PM | A86972 |
| Methyl tert-butyl ether (MTBE) | 640 | 20 | 50 | | µg/L | 50 | 4/4/2022 7:39:23 PM | A86972 |
| 1,2,4-Trimethylbenzene | 3.3 | 0.12 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 1,3,5-Trimethylbenzene | 0.47 | 0.18 | 1.0 | J | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 1,2-Dichloroethane (EDC) | 0.80 | 0.25 | 1.0 | J | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 1,1-Dichloroethane | 0.38 | 0.27 | 1.0 | J | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Isopropylbenzene | 20 | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 4-Isopropyltoluene | 0.43 | 0.20 | 1.0 | J | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| n-Butylbenzene | 2.7 | 0.25 | 3.0 | J | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| n-Propylbenzene | 56 | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| sec-Butylbenzene | 2.9 | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Xylenes, Total | 13 | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 83.7 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Surr: Dibromofluoromethane | 85.0 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:35:27 AM | A86942 |
| Surr: Toluene-d8 | 99.1 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 7:35:27 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203D54-004B

Client Sample ID: OW-14

Collection Date: 3/24/2022 10:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 6:32:56 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:30:00 AM

Lab ID: 2203D54-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.7 | 0.16 | 0.64 | | mg/L | 10 | 3/29/2022 4:41:10 PM | 66409 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/29/2022 4:41:10 PM | 66409 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/29/2022 4:41:10 PM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Phenol | 34 | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: 2-Fluorophenol | 49.3 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: Phenol-d5 | 40.0 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 89.1 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: Nitrobenzene-d5 | 67.6 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 57.4 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 89.6 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 4:28:59 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.1 | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Naphthalene | 13 | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| 1-Methylnaphthalene | 14 | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Acenaphthene | 0.32 | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Fluorene | 0.56 | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Phenanthrene | 0.22 | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Anthracene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 5:36:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:30:00 AM

Lab ID: 2203D54-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 58.4 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 43.9 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 5:36:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 71.7 | 0 | 72.3-147 | S | %Rec | 1 | 4/6/2022 5:36:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:30:00 AM

Lab ID: 2203D54-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 2.1 | 0.0082 | 0.015 | * | mg/L | 5 | 4/6/2022 4:42:11 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Cobalt | 0.0049 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Nickel | 0.086 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:40:47 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:12:18 PM | 66472 |
| Arsenic | 0.0031 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 2:12:18 PM | 66472 |
| Lead | 0.000097 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/31/2022 2:12:18 PM | 66472 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:12:18 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 4:01:10 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:30:00 AM

Lab ID: 2203D54-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 2.1 | 0.0056 | 0.010 | * | mg/L | 5 | 4/19/2022 12:16:26 PM | A87332 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Cobalt | 0.0050 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Nickel | 0.089 | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:15:02 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| Zinc | 0.0091 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 3:04:12 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:51:33 PM | B86786 |
| Arsenic | 0.0028 | 0.00012 | 0.0010 | | mg/L | 1 | 3/28/2022 1:51:33 PM | B86786 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:51:33 PM | B86786 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:51:33 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:56:32 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:55:00 AM

Lab ID: 2203D54-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 5:32:00 PM | A86911 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 4/1/2022 5:32:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.44 | 0.23 | 1.0 | J | µg/L | 1 | 4/4/2022 8:06:33 PM | A86972 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 4/4/2022 8:06:33 PM | A86972 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,2,4-Trimethylbenzene | 0.18 | 0.12 | 1.0 | J | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| n-Propylbenzene | 0.28 | 0.18 | 1.0 | J | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 97.4 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 96.1 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Surr: Dibromofluoromethane | 97.8 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:02:20 AM | A86942 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:02:20 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:55:00 AM

Lab ID: 2203D54-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 7:03:19 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203D54-005C

Client Sample ID: STP-1-NW

Collection Date: 3/24/2022 9:55:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.19 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 2:06:10 AM | 66409 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/29/2022 2:06:10 AM | 66409 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 2:06:10 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: 2-Fluorophenol | 45.0 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: Phenol-d5 | 35.3 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 48.9 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: Nitrobenzene-d5 | 56.0 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 47.9 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 75.5 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 5:10:17 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.14 | 0.048 | 1.0 | J | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Pyrene | 0.16 | 0.16 | 0.20 | J | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 6:21:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:55:00 AM

Lab ID: 2203D54-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.8 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 47.8 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 6:21:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 78.4 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 6:21:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:55:00 AM

Lab ID: 2203D54-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.11 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Cobalt | 0.0037 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Vanadium | 0.034 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| Zinc | 0.015 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:48:40 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:14:45 PM | 66472 |
| Arsenic | 0.0026 | 0.00013 | 0.0010 | | mg/L | 1 | 3/31/2022 2:14:45 PM | 66472 |
| Lead | 0.0010 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/31/2022 4:14:29 PM | 66473 |
| Selenium | 0.0057 | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:14:45 PM | 66472 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 4:03:18 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 9:55:00 AM

Lab ID: 2203D54-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.096 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:17:55 PM | A87332 |
| Silver | 0.0024 | 0.0013 | 0.0050 | J | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Vanadium | 0.034 | 0.0017 | 0.050 | J | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 3:05:38 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:54:13 PM | B86786 |
| Arsenic | 0.0024 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/28/2022 3:09:53 PM | B86786 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:54:13 PM | B86786 |
| Selenium | 0.0063 | 0.0017 | 0.0050 | | mg/L | 5 | 3/28/2022 3:09:53 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 2:58:41 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 5:52:00 PM | A86911 |
| Surr: BFB | 98.1 | 0 | 70-130 | | %Rec | 1 | 4/1/2022 5:52:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 4/4/2022 8:33:45 PM | A86972 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Ethylbenzene | 0.61 | 0.21 | 1.0 | J | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:29:13 AM | A86942 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:29:13 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.048 | | µg/L | 5 | 3/30/2022 7:33:44 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.028 | 0.016 | 0.064 | J | mg/L | 1 | 3/29/2022 2:30:13 AM | 66409 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/29/2022 2:30:13 AM | 66409 |
| Surr: DNOP | 86.3 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 2:30:13 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: 2-Fluorophenol | 34.6 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: Phenol-d5 | 28.7 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 51.1 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: Nitrobenzene-d5 | 49.7 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 40.9 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 70.5 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 5:52:03 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 7:06:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-44**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/24/2022 10:55:00 AM**Lab ID:** 2203D54-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 53.0 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 48.2 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 7:06:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 88.6 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 7:06:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.28 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Chromium | 0.013 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Cobalt | 0.0078 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Nickel | 0.0042 | 0.0033 | 0.010 | J | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Vanadium | 0.17 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| Zinc | 0.067 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:51:46 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/31/2022 4:16:56 PM | 66473 |
| Arsenic | 0.017 | 0.00013 | 0.0010 | * | mg/L | 1 | 3/31/2022 2:17:11 PM | 66473 |
| Lead | 0.019 | 0.00031 | 0.0025 | * | mg/L | 5 | 3/31/2022 4:16:56 PM | 66473 |
| Selenium | 0.016 | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:17:11 PM | 66473 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 4:05:26 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.029 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Chromium | 0.0029 | 0.0020 | 0.0060 | J | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:19:33 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Vanadium | 0.13 | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/29/2022 3:07:16 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:56:54 PM | B86786 |
| Arsenic | 0.013 | 0.00012 | 0.0010 | * | mg/L | 1 | 3/28/2022 1:56:54 PM | B86786 |
| Lead | 0.000090 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/28/2022 1:56:54 PM | B86786 |
| Selenium | 0.013 | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:56:54 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 3:00:51 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 1.3 | 0.023 | 0.050 | | mg/L | 1 | 4/1/2022 6:11:00 PM | A86911 |
| Surr: BFB | 100 | 0 | 70-130 | | %Rec | 1 | 4/1/2022 6:11:00 PM | A86911 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 4/4/2022 9:27:36 PM | A86972 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Ethylbenzene | 0.34 | 0.21 | 1.0 | J | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | 1400 | 20 | 50 | | µg/L | 50 | 4/4/2022 9:00:39 PM | A86972 |
| 1,2,4-Trimethylbenzene | 0.26 | 0.12 | 1.0 | J | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Acetone | 2.9 | 2.5 | 10 | J | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Surr: Dibromofluoromethane | 99.8 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:56:08 AM | A86942 |
| Surr: Toluene-d8 | 98.9 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 8:56:08 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.017 | 0.047 | | µg/L | 5 | 3/30/2022 8:04:00 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.89 | 0.016 | 0.064 | | mg/L | 1 | 3/29/2022 2:54:13 AM | 66409 |
| Motor Oil Range Organics (MRO) | 0.095 | 0.052 | 0.080 | B | mg/L | 1 | 3/29/2022 2:54:13 AM | 66409 |
| Surr: DNOP | 99.9 | 0 | 42.2-138 | | %Rec | 1 | 3/29/2022 2:54:13 AM | 66409 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: 2-Fluorophenol | 46.4 | 0 | 29.4-87.7 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: Phenol-d5 | 37.0 | 0 | 28.5-64.7 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: 2,4,6-Tribromophenol | 76.1 | 0 | 18.6-129 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: Nitrobenzene-d5 | 58.1 | 0 | 36.9-103 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: 2-Fluorobiphenyl | 54.1 | 0 | 38.1-99.9 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| Surr: 4-Terphenyl-d14 | 89.1 | 0 | 48-155 | | %Rec | 1 | 4/7/2022 6:34:03 PM | 66423 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 4/6/2022 8:47:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.4 | 0 | 31.6-100 | | %Rec | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Surr: 2-Fluorobiphenyl | 48.1 | 0 | 26.7-90.1 | | %Rec | 1 | 4/6/2022 8:47:00 PM | R87058 |
| Surr: 4-Terphenyl-d14 | 74.3 | 0 | 72.3-147 | | %Rec | 1 | 4/6/2022 8:47:00 PM | R87058 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Cobalt | 0.0052 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Nickel | 0.084 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 4:54:36 PM | 66644 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/31/2022 2:24:31 PM | 66473 |
| Arsenic | 0.00071 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/31/2022 2:24:31 PM | 66473 |
| Lead | 0.00088 | 0.000061 | 0.00050 | | mg/L | 1 | 3/31/2022 2:24:31 PM | 66473 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/31/2022 2:24:31 PM | 66473 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/28/2022 4:07:34 PM | 66425 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022

Lab ID: 2203D54-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.16 | 0.0011 | 0.0020 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Cobalt | 0.0052 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Nickel | 0.085 | 0.0033 | 0.010 | | mg/L | 1 | 4/19/2022 12:21:13 PM | A87332 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 3/29/2022 3:08:53 PM | C86825 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/28/2022 1:59:36 PM | B86786 |
| Arsenic | 0.00073 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/28/2022 1:59:36 PM | B86786 |
| Lead | 0.00055 | 0.000057 | 0.00050 | | mg/L | 1 | 3/28/2022 1:59:36 PM | B86786 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/28/2022 1:59:36 PM | B86786 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/29/2022 3:07:15 PM | 66456 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-3-24-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/24/2022 10:55:00 AM

Lab ID: 2203D54-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.75 | 0.23 | 1.0 | J | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Ethylbenzene | 0.25 | 0.21 | 1.0 | J | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 2-Butanone | 6.2 | 2.0 | 10 | J | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 99.4 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 98.4 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Surr: Dibromofluoromethane | 98.9 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:23:02 AM | A86942 |
| Surr: Toluene-d8 | 96.9 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:23:02 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203D54-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.57 | 0.23 | 1.0 | J | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Chloroform | 0.20 | 0.13 | 1.0 | J | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Surr: 1,2-Dichloroethane-d4 | 97.0 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Surr: Dibromofluoromethane | 98.3 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:50:02 AM | A86942 |
| Surr: Toluene-d8 | 98.7 | 0 | 70-130 | | %Rec | 1 | 4/2/2022 9:50:02 AM | A86942 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203D54

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|--------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | Trip Blank |
| Project: | 2022 GW Sampling 1st Qtr | Collection Date: | |
| Lab ID: | 2203D54-009B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/30/2022 9:19:55 PM | 66394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

April 05, 2022

Hall Environmental Analysis Laboratory

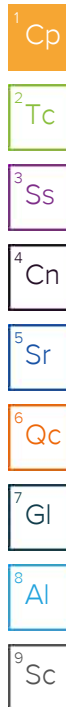
Sample Delivery Group: L1476135

Samples Received: 03/29/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink, appearing to read "Jason Romer".

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| 2203D54-003F OW-64 L1476135-03 | 7 |
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2203D54-001F EB-3-24-22 L1476135-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 10:56 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2203D54-002F OW-30 L1476135-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 10:58 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203D54-003F OW-64 L1476135-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 11:01 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203D54-004F OW-14 L1476135-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 11:04 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203D54-005F STP-1-NW L1476135-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 11:05 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203D54-006F MKTF-44 L1476135-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 11:06 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203D54-007F DUP-3-24-22 L1476135-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1841516 | 1 | 04/03/22 21:12 | 04/05/22 11:07 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jason Romer
Project Manager



Collected date/time: 03/24/22 08:30

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/05/2022 10:56 | WG1841516 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 03/24/22 08:55

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|------------------|
| Cyanide | 0.00562 | <u>J6</u> | 0.00500 | 1 | 04/05/2022 10:58 | <u>WG1841516</u> |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis
date / time | Batch |
|---------|--------|-----------|---------|----------|-------------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/05/2022 11:01 | WG1841516 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/05/2022 11:04 | WG1841516 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/24/22 09:55

L1476135

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0550 | | 0.00500 | 1 | 04/05/2022 11:05 | WG1841516 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 03/24/22 10:55

L1476135

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 04/05/2022 11:06 | WG1841516 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00726 | | 0.00500 | 1 | 04/05/2022 11:07 | WG1841516 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1476135-01,02,03,04,05,06,07

Method Blank (MB)

(MB) R3777668-1 04/05/22 10:52

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1476135-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1476135-01 04/05/22 10:56 • (DUP) R3777668-3 04/05/22 10:57

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1476156-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1476156-02 04/05/22 11:08 • (DUP) R3777668-6 04/05/22 11:10

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3777668-2 04/05/22 10:53

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0978 | 97.8 | 87.1-120 | |

L1476135-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1476135-02 04/05/22 10:58 • (MS) R3777668-4 04/05/22 10:59 • (MSD) R3777668-5 04/05/22 11:00

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00562 | 0.0955 | 0.103 | 89.9 | 97.4 | 1 | 90.0-110 | J6 | | 7.56 | 20 |

L1477288-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1477288-01 04/05/22 11:20 • (MS) R3777668-7 04/05/22 11:21 • (MSD) R3777668-8 04/05/22 11:22

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0702 | 0.0897 | 70.2 | 89.7 | 1 | 90.0-110 | J6 | J3 J6 | 24.4 | 20 |

Cp

Tc

Ss

Cn

Sr

Qc

Gl

Al

Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

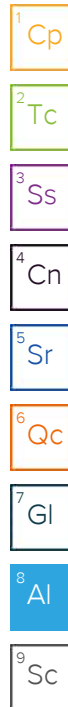
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

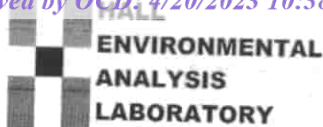
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

F231

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|--|--------------|------------------|-------------|-----------------------|-----------------------|---------------------|---------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2203D54-001F | EB-3-24-22 | 500AMBHDP | Groundw | 3/24/2022 8:30:00 AM | 1 | Total Cyanide |
| 2 | 2203D54-002F | OW-30 | 500AMBHDP | Groundw | 3/24/2022 8:55:00 AM | 1 | Total Cyanide |
| 3 | 2203D54-003F | OW-64 | 500AMBHDP | Groundw | 3/24/2022 9:30:00 AM | 1 | Total Cyanide |
| 4 | 2203D54-004F | OW-14 | 500AMBHDP | Groundw | 3/24/2022 10:30:00 AM | 1 | Total Cyanide |
| 5 | 2203D54-005F | STP-1-NW | 500AMBHDP | Groundw | 3/24/2022 9:55:00 AM | 1 | Total Cyanide |
| 6 | 2203D54-006F | MKTF-44 | 500AMBHDP | Groundw | 3/24/2022 10:55:00 AM | 1 | Total Cyanide |
| 7 | 2203D54-007F | DUP-3-24-22 | 500AMBHDP | Groundw | 3/24/2022 | 1 | Total Cyanide |

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N IF Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|-----------------|---------------|---------------------------------|------------|------------|---|
| Relinquished By: <i>me</i> | Date: 3/25/2022 | Time: 8:20 AM | Received By: <i>[Signature]</i> | Date: 3/29 | Time: 9:00 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-66644 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075590 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LLCS-66644 | | SampType: LCSLL | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: BatchQC | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075594 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 95.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.6 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 99.1 | 50 | 150 | | | J |
| Cobalt | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 67.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.3 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-66644 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 66644 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075595 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.3 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.7 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088697 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088702 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0030 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088704 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066488 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066489 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0020 | 0.002000 | 0 | 123 | 50 | 150 | | | |
| Beryllium | 0.0016 | 0.0020 | 0.002000 | 0 | 80.0 | 50 | 150 | | | J |
| Cadmium | 0.0027 | 0.0020 | 0.002000 | 0 | 135 | 50 | 150 | | | |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Cobalt | 0.0065 | 0.0060 | 0.006000 | 0 | 108 | 50 | 150 | | | |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 109 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 107 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C86825 | RunNo: 86825 | | | | | | | | |
| Prep Date: | Analysis Date: 3/29/2022 | SeqNo: 3066490 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Cadmium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 85 | 115 | | | |
| Chromium | 0.55 | 0.0060 | 0.5000 | 0 | 110 | 85 | 115 | | | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 111 | 85 | 115 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2203D54-002EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: OW-30 | | Batch ID: C86825 | | RunNo: 86825 | | | | | | |
| Prep Date: | | Analysis Date: 3/29/2022 | | SeqNo: 3066493 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.70 | 0.0020 | 0.5000 | 0.1550 | 110 | 70 | 130 | | | |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 114 | 70 | 130 | | | |
| Cadmium | 0.56 | 0.0020 | 0.5000 | 0 | 112 | 70 | 130 | | | |
| Chromium | 0.56 | 0.0060 | 0.5000 | 0 | 112 | 70 | 130 | | | |
| Cobalt | 0.55 | 0.0060 | 0.5000 | 0.004552 | 109 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 70 | 130 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 109 | 70 | 130 | | | |
| Zinc | 0.54 | 0.010 | 0.5000 | 0.005224 | 108 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203D54-002EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: OW-30 | | Batch ID: C86825 | | RunNo: 86825 | | | | | | |
| Prep Date: | | Analysis Date: 3/29/2022 | | SeqNo: 3066494 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.71 | 0.0020 | 0.5000 | 0.1550 | 111 | 70 | 130 | 0.429 | 20 | |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 115 | 70 | 130 | 0.992 | 20 | |
| Cadmium | 0.57 | 0.0020 | 0.5000 | 0 | 113 | 70 | 130 | 1.21 | 20 | |
| Chromium | 0.57 | 0.0060 | 0.5000 | 0 | 113 | 70 | 130 | 0.735 | 20 | |
| Cobalt | 0.56 | 0.0060 | 0.5000 | 0.004552 | 111 | 70 | 130 | 1.50 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 110 | 70 | 130 | 1.18 | 20 | |
| Vanadium | 0.55 | 0.050 | 0.5000 | 0 | 110 | 70 | 130 | 1.55 | 20 | |
| Zinc | 0.55 | 0.010 | 0.5000 | 0.005224 | 110 | 70 | 130 | 1.73 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2203D54-001EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-3-24-22 | | Batch ID: C86825 | | RunNo: 86825 | | | | | | |
| Prep Date: | | Analysis Date: 3/29/2022 | | SeqNo: 3066496 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.56 | 0.0020 | 0.5000 | 0 | 113 | 70 | 130 | | | |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 114 | 70 | 130 | | | |
| Cadmium | 0.60 | 0.0020 | 0.5000 | 0 | 120 | 70 | 130 | | | |
| Chromium | 0.58 | 0.0060 | 0.5000 | 0 | 116 | 70 | 130 | | | |
| Cobalt | 0.57 | 0.0060 | 0.5000 | 0 | 115 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 114 | 70 | 130 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 108 | 70 | 130 | | | |
| Zinc | 0.57 | 0.010 | 0.5000 | 0.007060 | 112 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203D54-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-3-24-22 | | Batch ID: C86825 | | RunNo: 86825 | | | | | | |
| Prep Date: | | Analysis Date: 3/29/2022 | | SeqNo: 3066497 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.57 | 0.0020 | 0.5000 | 0 | 113 | 70 | 130 | 0.479 | 20 | |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 113 | 70 | 130 | 0.738 | 20 | |
| Cadmium | 0.59 | 0.0020 | 0.5000 | 0 | 118 | 70 | 130 | 1.13 | 20 | |
| Chromium | 0.57 | 0.0060 | 0.5000 | 0 | 115 | 70 | 130 | 0.714 | 20 | |
| Cobalt | 0.56 | 0.0060 | 0.5000 | 0 | 113 | 70 | 130 | 1.64 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 113 | 70 | 130 | 1.35 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 108 | 70 | 130 | 0.270 | 20 | |
| Zinc | 0.56 | 0.010 | 0.5000 | 0.007060 | 110 | 70 | 130 | 1.41 | 20 | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|--|------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088745 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID: LLLCS | | SampType: LCSLL | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | |
| Client ID: BatchQC | | Batch ID: A87332 | | | RunNo: 87332 | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | | SeqNo: 3088746 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088747 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2203D54-007EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: DUP-3-24-22 | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3090051 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.59 | 0.010 | 0.5000 | 0.08504 | 102 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2203D54-007EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: DUP-3-24-22 | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3090052 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.57 | 0.010 | 0.5000 | 0.08504 | 97.7 | 70 | 130 | 3.64 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: B86786 | | RunNo: 86786 | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | | SeqNo: 3064498 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B86786 | | RunNo: 86786 | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | | SeqNo: 3064499 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00093 | 0.0010 | 0.001000 | 0 | 93.4 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |
| Lead | 0.00056 | 0.00050 | 0.0005000 | 0 | 112 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B86786 | | RunNo: 86786 | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | | SeqNo: 3064500 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66472 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 66472 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071013 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLLCS-66472 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 66472 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071014 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: MSLLCS-66472 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|--------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66472 | RunNo: 86921 | | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071014 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.5 | 50 | 150 | | | J |
| Lead | 0.00048 | 0.00050 | 0.0005000 | 0 | 96.9 | 50 | 150 | | | J |
| Selenium | 0.00085 | 0.0010 | 0.001000 | 0 | 84.6 | 50 | 150 | | | J |

| Sample ID: MSLCS-66472 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|-------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66472 | RunNo: 86921 | | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071015 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.0 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| Sample ID: MB-66473 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
|-----------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66473 | RunNo: 86921 | | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071017 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: MSLLCS-66473 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|--------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66473 | RunNo: 86921 | | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071018 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00095 | 0.0010 | 0.001000 | 0 | 95.0 | 50 | 150 | | | J |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 97.8 | 50 | 150 | | | J |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.9 | 50 | 150 | | | J |
| Selenium | 0.00092 | 0.0010 | 0.001000 | 0 | 91.7 | 50 | 150 | | | J |

| Sample ID: MSLCS-66473 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|-------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66473 | RunNo: 86921 | | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | SeqNo: 3071089 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-66473 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 66473 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071089 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 100 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203D54-006DMSLL | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: MKTF-44 | Batch ID: 66473 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071097 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.043 | 0.0010 | 0.02500 | 0.01745 | 101 | 70 | 130 | | | |
| Selenium | 0.040 | 0.0010 | 0.02500 | 0.01627 | 96.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203D54-006DMSDL | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: MKTF-44 | Batch ID: 66473 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071098 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.043 | 0.0010 | 0.02500 | 0.01745 | 100 | 70 | 130 | 0.183 | 20 | |
| Selenium | 0.040 | 0.0010 | 0.02500 | 0.01627 | 96.8 | 70 | 130 | 0.411 | 20 | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203D54-006DMSLL | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: MKTF-44 | Batch ID: 66473 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071155 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.015 | 0.0050 | 0.02500 | 0 | 58.8 | 70 | 130 | | | S |
| Lead | 0.031 | 0.0025 | 0.01250 | 0.01915 | 93.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203D54-006DMSDL | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: MKTF-44 | Batch ID: 66473 | | RunNo: 86921 | | | | | | | |
| Prep Date: 3/29/2022 | Analysis Date: 3/31/2022 | | SeqNo: 3071156 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.014 | 0.0050 | 0.02500 | 0 | 54.9 | 70 | 130 | 6.70 | 20 | S |
| Lead | 0.031 | 0.0025 | 0.01250 | 0.01915 | 94.1 | 70 | 130 | 0.289 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86786 | RunNo: 86786 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3064501 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86786 | RunNo: 86786 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3064502 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00093 | 0.0010 | 0.001000 | 0 | 93.4 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |
| Lead | 0.00056 | 0.00050 | 0.0005000 | 0 | 112 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86786 | RunNo: 86786 | | | | | | | | |
| Prep Date: | Analysis Date: 3/28/2022 | SeqNo: 3064503 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66425 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064662 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-66425 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064663 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00016 0.00020 0.0001500 | 0 107 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66425 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66425 | RunNo: 86790 |
| Prep Date: 3/28/2022 | Analysis Date: 3/28/2022 | SeqNo: 3064664 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 98.0 85 115 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66456 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66456 | RunNo: 86816 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3065977 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-66456 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66456 | RunNo: 86816 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3065978 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00015 0.00020 0.0001500 | 0 101 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66456 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66456 | RunNo: 86816 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3065979 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 97.1 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66394 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066618 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66394 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066619 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66394 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066626 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 116 70 130 |

| | | |
|-----------------------|--------------------------|--|
| Sample ID: LCSD-66394 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 66394 | RunNo: 86828 |
| Prep Date: 3/29/2022 | Analysis Date: 3/29/2022 | SeqNo: 3066627 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 117 70 130 0.511 20 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2203D54-009BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: Trip Blank | Batch ID: 66394 | RunNo: 86860 |
| Prep Date: 3/29/2022 | Analysis Date: 3/30/2022 | SeqNo: 3068584 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.077 | 0.0095 0.09511 0 81.0 65 135 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2203D54-009BMSD | SampType: MSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: Trip Blank | Batch ID: 66394 | RunNo: 86860 |
| Prep Date: 3/29/2022 | Analysis Date: 3/30/2022 | SeqNo: 3068585 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.075 | 0.0094 0.09383 0 80.2 65 135 2.28 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66409 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66409 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065883 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.040 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | 0.099 | 0.080 | | | | | | | | |
| Surr: DNOP | 0.035 | | 0.03750 | | 94.4 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66409 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66409 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065884 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.098 | 0.064 | 0.1875 | 0 | 52.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66409 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66409 | RunNo: 86806 | | | | | | | | |
| Prep Date: 3/25/2022 | Analysis Date: 3/28/2022 | SeqNo: 3065885 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | 0.1875 | 0 | 56.0 | 31.7 | 75.4 | 6.85 | 20 | |
| Surr: DNOP | 0.020 | | 0.01875 | | 106 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A86911 | | RunNo: 86911 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3070641 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.52 | 0.050 | 0.5000 | 0 | 105 | 80 | 120 | | | |
| Surr: BFB | 43 | | 20.00 | | 215 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A86911 | | RunNo: 86911 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3070642 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203D54-001ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-3-24-22 | Batch ID: A86911 | | RunNo: 86911 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3071473 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.57 | 0.050 | 0.5000 | 0 | 113 | 70 | 130 | | | |
| Surr: BFB | 42 | | 20.00 | | 212 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203D54-001amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-3-24-22 | Batch ID: A86911 | | RunNo: 86911 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3071474 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.57 | 0.050 | 0.5000 | 0 | 113 | 70 | 130 | 0.212 | 20 | |
| Surr: BFB | 42 | | 20.00 | | 212 | 70 | 130 | 0 | 0 | S |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: B86939 | | RunNo: 86939 | | | | | | | |
| Prep Date: | Analysis Date: 4/2/2022 | | SeqNo: 3071801 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.57 | 0.050 | 0.5000 | 0 | 114 | 80 | 120 | | | |
| Surr: BFB | 45 | | 20.00 | | 225 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: B86939 | | RunNo: 86939 | | | | | | | |
| Prep Date: | Analysis Date: 4/2/2022 | | SeqNo: 3071802 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | | | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: B86939 | | RunNo: 86939 | | | | | | | |
| Prep Date: | Analysis Date: 4/2/2022 | | SeqNo: 3071802 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 105 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A86942 | | RunNo: 86942 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3071888 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.4 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.2 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 89.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 83.5 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 84.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 99.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A86942 | | RunNo: 86942 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3071912 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | 0.21 | 1.0 | | | | | | | | J |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A86942 | | RunNo: 86942 | | | | | | | |
| Prep Date: | Analysis Date: 4/1/2022 | | SeqNo: 3071912 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 97.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A86972 | | RunNo: 86972 | | | | | | | |
| Prep Date: | Analysis Date: 4/4/2022 | | SeqNo: 3073237 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 17 | 1.0 | 20.00 | 0 | 82.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A86972 | | RunNo: 86972 | | | | | | | |
| Prep Date: | Analysis Date: 4/4/2022 | | SeqNo: 3073250 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs4 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A87014 | | RunNo: 87014 | | | | | | | |
| Prep Date: | Analysis Date: 4/5/2022 | | SeqNo: 3074645 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs4 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A87014 | | RunNo: 87014 | | | | | | | |
| Prep Date: | Analysis Date: 4/5/2022 | | SeqNo: 3074645 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 88.1 | 70 | 130 | | | |
| Chlorobenzene | 17 | 1.0 | 20.00 | 0 | 85.5 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 87.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 97.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 97.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A87014 | | RunNo: 87014 | | | | | | | |
| Prep Date: | Analysis Date: 4/5/2022 | | SeqNo: 3074650 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A87014 | | RunNo: 87014 | | | | | | | |
| Prep Date: | Analysis Date: 4/5/2022 | | SeqNo: 3074650 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.6 | | 10.00 | | 96.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.5 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66423 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 66423 | | RunNo: 86931 | | | | | | | |
| Prep Date: 3/28/2022 | Analysis Date: 4/3/2022 | | SeqNo: 3071661 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 51.5 | 15 | 87.6 | | | |
| Phenol | 75 | 5.0 | 200.0 | 0 | 37.7 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.0 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 73.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 68.3 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 100 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66423 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66423 | | RunNo: 86931 | | | | | | | |
| Prep Date: 3/28/2022 | Analysis Date: 4/3/2022 | | SeqNo: 3071662 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 59 | 5.0 | 100.0 | 0 | 59.2 | 15 | 87.6 | 13.9 | 30.4 | |
| Phenol | 83 | 5.0 | 200.0 | 0 | 41.6 | 16.8 | 70.5 | 9.78 | 37.2 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 52.8 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 42.0 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 80.6 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 73 | | 100.0 | | 72.8 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 63 | | 100.0 | | 62.7 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 101 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66423 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 66423 | | RunNo: 87124 | | | | | | | |
| Prep Date: 3/28/2022 | Analysis Date: 4/7/2022 | | SeqNo: 3080308 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66423 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66423 | | RunNo: 87124 | | | | | | | |
| Prep Date: 3/28/2022 | Analysis Date: 4/7/2022 | | SeqNo: 3080308 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.4 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 73 | | 200.0 | | 36.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 61.1 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 58.1 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 52 | | 100.0 | | 51.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 85.3 | 48 | 155 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: mb-66423 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: PBW | | Batch ID: R87058 | | RunNo: 87058 | | | | | | |
| Prep Date: | | Analysis Date: 4/6/2022 | | SeqNo: 3076829 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | 0.16 | 0.20 | | | | | | | | J |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 86 | | 200.0 | | 43.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 113 | 72.3 | 147 | | | E |

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: lcs-66423-lf | | SampType: LCS | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSW | | Batch ID: R87058 | | | RunNo: 87058 | | | | | |
| Prep Date: | | Analysis Date: 4/6/2022 | | | SeqNo: 3076830 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 0.10 | 2.000 | 0 | 34.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 55.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.10 | 2.000 | 0 | 91.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.9 | 0.10 | 2.000 | 0 | 93.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.3 | 0.20 | 2.000 | 0 | 113 | 52.9 | 123 | | | |
| Pyrene | 2.0 | 0.20 | 2.000 | 0 | 101 | 51 | 113 | | | |
| Benz(a)anthracene | 2.4 | 0.10 | 2.000 | 0 | 121 | 51 | 147 | | | |
| Chrysene | 2.1 | 0.10 | 2.000 | 0 | 106 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.4 | 0.10 | 2.000 | 0 | 119 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 127 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 60 | | 102.0 | | 58.6 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203D54

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-66423-If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R87058 | | RunNo: 87058 | | | | | | | |
| Prep Date: | Analysis Date: 4/6/2022 | | SeqNo: 3076830 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 91 | | 202.0 | | 45.1 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 102.0 | | 58.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 102.0 | | 106 | 72.3 | 147 | | | E |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-66423-If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R87058 | | RunNo: 87058 | | | | | | | |
| Prep Date: | Analysis Date: 4/6/2022 | | SeqNo: 3076831 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.58 | 0.10 | 2.000 | 0 | 29.0 | 20.2 | 48.4 | 15.9 | 30.1 | |
| Naphthalene | 0.90 | 0.10 | 2.000 | 0 | 45.0 | 21.3 | 79.9 | 20.0 | 25.6 | |
| 1-Methylnaphthalene | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 22.2 | 80.3 | 17.5 | 25 | |
| 2-Methylnaphthalene | 0.96 | 0.10 | 2.000 | 0 | 48.0 | 20.6 | 80.1 | 17.1 | 25 | |
| Acenaphthene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 29.8 | 82.7 | 18.8 | 27.8 | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 33.3 | 86 | 19.5 | 26.4 | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 67.0 | 38.2 | 93.9 | 30.4 | 27.9 | R |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 41.1 | 95.6 | 22.8 | 25.6 | |
| Fluoranthene | 1.9 | 0.20 | 2.000 | 0 | 94.0 | 52.9 | 123 | 18.4 | 22.8 | |
| Pyrene | 1.5 | 0.20 | 2.000 | 0 | 75.0 | 51 | 113 | 29.5 | 20 | R |
| Benz(a)anthracene | 1.9 | 0.10 | 2.000 | 0 | 93.0 | 51 | 147 | 26.2 | 24.1 | R |
| Chrysene | 1.5 | 0.10 | 2.000 | 0 | 76.0 | 55.3 | 115 | 33.0 | 20 | R |
| Benzo(b)fluoranthene | 1.7 | 0.10 | 2.000 | 0 | 84.0 | 44.4 | 136 | 34.5 | 24.5 | R |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 31.4 | 165 | 35.2 | 21.1 | R |
| Surr: Nitrobenzene-d5 | 58 | | 102.0 | | 57.3 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 80 | | 102.0 | | 78.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 56 | | 202.0 | | 27.7 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 89.6 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203D54**RcptNo: **1**Received By: **Cheyenne Cason** 3/25/2022 7:23:00 AMCompleted By: **Sean Livingston** 3/25/2022 7:59:17 AMReviewed By: **SR 3/25/22**

Chad
Sean Livingston

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ TMC 3/25/22 NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

14 - 7

<2 or >12 unless noted)

Adjusted? **yes**Checked by: **TMC 3/25/22**Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: **Added 3.0mL of NaOH to sample 007P for proper pH. - TMC 3/25/22**

17. Cooler Information **All fraction B samples are preserved with Absorbent acid NOT $\text{Na}_2\text{S}_2\text{O}_3$ -**

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.0 | Good | Yes | | | |
| 2 | 2.9 | Good | Yes | | | |
| 3 | 3.5 | Good | Yes | | | |

TMC 3/25/22



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 23, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 Quarterly Sampling 1st Qtr

OrderNo.: 2203496

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/9/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Case Narrative

WO#: 2203496
Date: 3/23/2022

CLIENT: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270:

Samples with "S" flagged surrogates were reextracted and reanalyzed to confirm the original data.

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Chloromethane | 0.47 | 0.41 | 3.0 | J | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 95.3 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Surr: Dibromofluoromethane | 95.7 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 3:36:51 PM | B86433 |
| Surr: Toluene-d8 | 95.4 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 3:36:51 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.040 | 0.012 | 0.050 | J | mg/L | 1 | 3/17/2022 1:26:45 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 1:26:45 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/15/2022 2:04:36 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 4:56:23 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 4:56:23 PM | 66084 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 4:56:23 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: 2-Fluorophenol | 29.0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: Phenol-d5 | 21.9 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 50.5 | 0 | 18.6-129 | | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: Nitrobenzene-d5 | 36.8 | 0 | 36.9-103 | S | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 36.7 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 76.3 | 0 | 48-155 | | %Rec | 1 | 3/15/2022 5:35:41 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 3:03:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 42.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 3:03:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 93.0 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 3:03:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Vanadium | ND | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Barium | ND | 0.00046 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 2:56:19 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 5:52:26 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 11:42:57 AM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 11:42:57 AM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 11:42:57 AM | C86413 |
| Zinc | 0.0054 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 11:42:57 AM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Barium | ND | 0.00046 | 0.0010 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Chromium | 0.00027 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/11/2022 12:05:27 PM | B86418 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/16/2022 12:47:33 PM | B86537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 1:33:45 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 24 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.68 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,1-Dichloroethane | 0.82 | 0.27 | 1.0 | J | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 99.2 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:03:53 PM | B86433 |
| Surr: Toluene-d8 | 95.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:03:53 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.062 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 2:52:24 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 2:52:24 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/15/2022 2:19:41 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.069 | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 5:20:31 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 5:20:31 PM | 66084 |
| Surr: DNOP | 91.0 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 5:20:31 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: 2-Fluorophenol | 41.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: Phenol-d5 | 33.0 | 0 | 28.5-64.7 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 61.5 | 0 | 18.6-129 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: Nitrobenzene-d5 | 49.1 | 0 | 36.9-103 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 52.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 84.2 | 0 | 48-155 | | %Rec | 1 | 3/15/2022 6:17:57 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.2 | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 3:55:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.0 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 55.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 3:55:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 102 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 3:55:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.011 | 0.00017 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Vanadium | 0.041 | 0.00058 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Arsenic | 0.0026 | 0.00013 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Barium | 1.6 | 0.023 | 0.050 | | mg/L | 50 | 3/17/2022 3:18:19 PM | 66151 |
| Beryllium | 0.0016 | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Chromium | 0.045 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Lead | 0.014 | 0.000061 | 0.00050 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Nickel | 0.033 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Selenium | 0.0030 | 0.00037 | 0.0010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Silver | 0.00030 | 0.00022 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| Zinc | 0.041 | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:13:09 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00042 | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:23:26 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 8:20:00 AM

Lab ID: 2203496-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 11:47:22 AM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 11:47:22 AM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 11:47:22 AM | C86413 |
| Zinc | 0.0073 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 11:47:22 AM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/11/2022 12:18:39 PM | B86418 |
| Arsenic | 0.00043 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:08:08 PM | B86418 |
| Barium | 0.11 | 0.0023 | 0.0050 | | mg/L | 5 | 3/11/2022 12:18:39 PM | B86418 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 12:08:08 PM | B86418 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/11/2022 12:18:39 PM | B86418 |
| Chromium | 0.00048 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:08:08 PM | B86418 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/11/2022 12:18:39 PM | B86418 |
| Nickel | 0.0025 | 0.00048 | 0.0010 | | mg/L | 1 | 3/16/2022 12:55:37 PM | B86537 |
| Selenium | 0.00045 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/16/2022 12:55:37 PM | B86537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 1:35:53 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:00:00 AM

Lab ID: 2203496-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 13 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.49 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,1-Dichloroethane | 0.54 | 0.27 | 1.0 | J | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 97.3 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:30:56 PM | B86433 |
| Surr: Toluene-d8 | 94.8 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:30:56 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.054 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 3:21:07 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 3:21:07 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:00:00 AM

Lab ID: 2203496-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/15/2022 2:34:50 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:00:00 AM

Lab ID: 2203496-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.031 | 0.016 | 0.064 | J | mg/L | 1 | 3/11/2022 5:44:36 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 5:44:36 PM | 66084 |
| Surr: DNOP | 92.8 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 5:44:36 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: 2-Fluorophenol | 44.3 | 0 | 29.4-87.7 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: Phenol-d5 | 33.5 | 0 | 28.5-64.7 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 69.2 | 0 | 18.6-129 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: Nitrobenzene-d5 | 50.8 | 0 | 36.9-103 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 54.7 | 0 | 38.1-99.9 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 88.4 | 0 | 48-155 | | %Rec | 1 | 3/15/2022 7:00:10 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.42 | 0.048 | 1.0 | J | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 4:47:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** BW-5B**Project:** 2022 Quarterly Sampling 1st Qtr**Collection Date:** 3/8/2022 9:00:00 AM**Lab ID:** 2203496-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.0 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 45.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 4:47:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 100 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 4:47:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:00:00 AM

Lab ID: 2203496-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00021 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Vanadium | 0.012 | 0.00058 | 0.0010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Arsenic | 0.00096 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Barium | 0.26 | 0.0046 | 0.010 | | mg/L | 10 | 3/17/2022 3:20:46 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Chromium | 0.0014 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Lead | 0.00015 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Nickel | 0.0029 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Selenium | 0.00076 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Silver | 0.00066 | 0.00022 | 0.00050 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:15:36 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 5:55:39 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:00:00 AM

Lab ID: 2203496-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 11:50:26 AM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 11:50:26 AM | C86413 |
| Vanadium | 0.0084 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 11:50:26 AM | C86413 |
| Zinc | 0.0074 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 11:50:26 AM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/11/2022 12:10:49 PM | B86418 |
| Arsenic | 0.00079 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:10:49 PM | B86418 |
| Barium | 0.26 | 0.0046 | 0.010 | | mg/L | 10 | 3/11/2022 12:21:20 PM | B86418 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 12:10:49 PM | B86418 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/16/2022 1:00:59 PM | B86537 |
| Chromium | 0.00069 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:10:49 PM | B86418 |
| Lead | 0.00010 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/16/2022 1:00:59 PM | B86537 |
| Nickel | 0.011 | 0.00048 | 0.0010 | | mg/L | 1 | 3/16/2022 1:00:59 PM | B86537 |
| Selenium | 0.0011 | 0.00034 | 0.0010 | | mg/L | 1 | 3/16/2022 1:00:59 PM | B86537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 2:57:30 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 53 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.52 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 99.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Surr: Dibromofluoromethane | 99.1 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:58:00 PM | B86433 |
| Surr: Toluene-d8 | 91.5 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 4:58:00 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.085 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 3:49:41 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 3:49:41 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/15/2022 2:50:02 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | J | mg/L | 1 | 3/11/2022 6:08:41 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 6:08:41 PM | 66084 |
| Surr: DNOP | 95.9 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 6:08:41 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: Phenol-d5 | 1.71 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 53.6 | 0 | 18.6-129 | | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | S | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 11.5 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 96.2 | 0 | 48-155 | | %Rec | 1 | 3/15/2022 7:42:27 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 5:38:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 55.0 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 45.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 5:38:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 94.0 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 5:38:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Vanadium | ND | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Arsenic | 0.0022 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Barium | 0.055 | 0.0023 | 0.0050 | | mg/L | 5 | 3/17/2022 6:12:20 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Nickel | 0.0013 | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 3:10:59 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 5:57:47 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:25:00 AM

Lab ID: 2203496-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 11:53:40 AM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 11:53:40 AM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 11:53:40 AM | C86413 |
| Zinc | 0.0086 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 11:53:40 AM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/11/2022 12:13:31 PM | B86418 |
| Arsenic | 0.0018 | 0.00012 | 0.0010 | | mg/L | 1 | 3/11/2022 12:13:31 PM | B86418 |
| Barium | 0.050 | 0.00046 | 0.0010 | | mg/L | 1 | 3/16/2022 1:11:46 PM | B86537 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 12:13:31 PM | B86418 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/16/2022 1:11:46 PM | B86537 |
| Chromium | 0.00025 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 12:13:31 PM | B86418 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/11/2022 12:13:31 PM | B86418 |
| Nickel | 0.0011 | 0.00048 | 0.0010 | | mg/L | 1 | 3/16/2022 1:11:46 PM | B86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/16/2022 1:11:46 PM | B86537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:01:46 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:50:00 AM

Lab ID: 2203496-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 4.7 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.51 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 98.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:25:02 PM | B86433 |
| Surr: Toluene-d8 | 95.1 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:25:02 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.049 | 0.012 | 0.050 | J | mg/L | 1 | 3/17/2022 4:18:09 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 4:18:09 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|---------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-52 |
| Project: | 2022 Quarterly Sampling 1st Qtr | Collection Date: | 3/8/2022 9:50:00 AM |
| Lab ID: | 2203496-005B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/15/2022 3:05:08 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:50:00 AM

Lab ID: 2203496-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.026 | 0.016 | 0.064 | J | mg/L | 1 | 3/11/2022 6:32:47 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 6:32:47 PM | 66084 |
| Surr: DNOP | 95.0 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 6:32:47 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: 2-Fluorophenol | 1.39 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: Phenol-d5 | 2.12 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 37.1 | 0 | 18.6-129 | | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: Nitrobenzene-d5 | 1.97 | 0 | 36.9-103 | S | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 5.36 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 74.6 | 0 | 48-155 | | %Rec | 1 | 3/15/2022 8:24:27 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 6:29:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:50:00 AM

Lab ID: 2203496-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 54.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 6:29:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 110 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 6:29:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:50:00 AM

Lab ID: 2203496-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00048 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Vanadium | 0.0067 | 0.00058 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Arsenic | 0.00075 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Barium | 0.035 | 0.00046 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Chromium | 0.0014 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Lead | 0.00023 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Nickel | 0.00092 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:18:02 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:04:11 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 9:50:00 AM

Lab ID: 2203496-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:01:48 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:01:48 PM | C86413 |
| Vanadium | 0.011 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 12:01:48 PM | C86413 |
| Zinc | 0.0049 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:01:48 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Arsenic | 0.00079 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Barium | 0.043 | 0.00046 | 0.0010 | | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/16/2022 1:17:09 PM | B86537 |
| Chromium | 0.00041 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:17:09 PM | B86537 |
| Nickel | 0.00057 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/11/2022 2:37:04 PM | C86418 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:03:55 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 3300 | 39 | 100 | | µg/L | 100 | 3/14/2022 1:06:27 PM | B86459 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.53 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Acetone | 3.0 | 2.5 | 10 | J | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 93.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 97.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Surr: Dibromofluoromethane | 96.6 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:52:07 PM | B86433 |
| Surr: Toluene-d8 | 94.7 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 5:52:07 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 3.0 | 0.061 | 0.25 | | mg/L | 5 | 3/17/2022 4:46:35 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 5 | 3/17/2022 4:46:35 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/15/2022 3:20:16 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.42 | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 6:56:49 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 6:56:49 PM | 66084 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 6:56:49 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: 2-Fluorophenol | 2.05 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: Phenol-d5 | 6.86 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 52.1 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: Nitrobenzene-d5 | 3.05 | 0 | 36.9-103 | S | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 15.5 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 78.5 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 12:49:58 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.64 | 0.048 | 1.0 | J | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 7:19:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.5 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 45.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 7:19:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 100 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 7:19:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00089 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Vanadium | 0.0015 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:23:12 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Arsenic | 0.00076 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Barium | 0.10 | 0.0023 | 0.0050 | | mg/L | 5 | 3/17/2022 3:25:39 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Chromium | 0.0017 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Lead | 0.00028 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Nickel | 0.027 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:25:23 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:10:36 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:15:00 AM

Lab ID: 2203496-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:04:53 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:04:53 PM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:04:53 PM | C86413 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:04:53 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| Arsenic | 0.00059 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| Barium | 0.092 | 0.0023 | 0.0050 | | mg/L | 5 | 3/16/2022 1:22:32 PM | B86537 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/16/2022 1:22:32 PM | B86537 |
| Chromium | 0.00048 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/16/2022 1:22:32 PM | B86537 |
| Nickel | 0.024 | 0.00048 | 0.0010 | | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/11/2022 2:39:46 PM | C86418 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:10:19 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 0.51 | 0.39 | 1.0 | J | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 97.3 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Surr: Dibromofluoromethane | 92.1 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:19:11 PM | B86433 |
| Surr: Toluene-d8 | 94.2 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:19:11 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.039 | 0.012 | 0.050 | J | mg/L | 1 | 3/17/2022 5:15:11 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 5:15:11 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/15/2022 3:35:18 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|--------------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: TOM | | | |
| Diesel Range Organics (DRO) | 0.13 | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 7:20:49 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 7:20:49 PM | 66084 |
| Surr: DNOP | 96.5 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 7:20:49 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: JME | | | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: Phenol-d5 | 2.13 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 2.33 | 0 | 18.6-129 | S | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | S | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 2.98 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 77.7 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 1:31:56 PM | 66091 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 9:08:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 57.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 9:08:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 9:08:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0021 | 0.0017 | 0.010 | J | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Vanadium | ND | 0.0058 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Arsenic | 0.0028 | 0.0013 | 0.010 | J | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Barium | 0.060 | 0.0046 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Beryllium | ND | 0.0025 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Cadmium | ND | 0.00080 | 0.0050 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Chromium | ND | 0.0056 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Lead | 0.0015 | 0.00061 | 0.0050 | J | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Nickel | 0.0082 | 0.0048 | 0.010 | J | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Selenium | ND | 0.0037 | 0.010 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Silver | ND | 0.0022 | 0.0050 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| Zinc | ND | 0.038 | 0.10 | | mg/L | 10 | 3/17/2022 3:28:05 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:12:44 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 10:45:00 AM

Lab ID: 2203496-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.023 | 0.012 | 0.030 | J | mg/L | 5 | 3/11/2022 12:13:33 PM | C86413 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 3/11/2022 12:13:33 PM | C86413 |
| Vanadium | ND | 0.0086 | 0.25 | | mg/L | 5 | 3/11/2022 12:13:33 PM | C86413 |
| Zinc | 0.020 | 0.016 | 0.050 | J | mg/L | 5 | 3/11/2022 12:13:33 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 3/21/2022 4:30:49 PM | A86624 |
| Arsenic | ND | 0.0024 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Barium | 0.052 | 0.0092 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Beryllium | ND | 0.0040 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Cadmium | 0.0030 | 0.0013 | 0.010 | J | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Chromium | ND | 0.0028 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Lead | ND | 0.0011 | 0.010 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Nickel | ND | 0.0095 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| Selenium | ND | 0.0069 | 0.020 | | mg/L | 20 | 3/18/2022 1:30:57 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:12:28 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 5.7 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.51 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,1-Dichloroethane | 0.73 | 0.27 | 1.0 | J | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,1-Dichloroethene | 0.47 | 0.20 | 1.0 | J | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 98.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Surr: Dibromofluoromethane | 98.7 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:46:13 PM | B86433 |
| Surr: Toluene-d8 | 94.7 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 6:46:13 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.042 | 0.012 | 0.050 | J | mg/L | 1 | 3/17/2022 5:43:45 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 5:43:45 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/15/2022 3:50:25 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: TOM | |
| Diesel Range Organics (DRO) | 0.080 | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 7:44:51 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 7:44:51 PM | 66084 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 7:44:51 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: Phenol-d5 | 1.31 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 37.8 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | S | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 3.37 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 81.4 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 2:14:27 PM | 66091 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.3 | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 9:56:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 58.0 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 41.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 9:56:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 102 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 9:56:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Vanadium | 0.0080 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Arsenic | 0.00065 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Barium | 0.049 | 0.00046 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Lead | 0.00011 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Nickel | 0.0012 | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Selenium | 0.010 | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 3:15:53 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:14:53 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0032 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/11/2022 12:15:11 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:15:11 PM | C86413 |
| Vanadium | 0.0051 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 12:15:11 PM | C86413 |
| Zinc | 0.0094 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:15:11 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:33:30 PM | A86624 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Barium | 0.051 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Chromium | ND | 0.00069 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| Selenium | 0.0095 | 0.0017 | 0.0050 | | mg/L | 5 | 3/18/2022 1:33:39 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:14:37 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | 25 | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,2-Dichloroethane (EDC) | 0.67 | 0.25 | 1.0 | J | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,1-Dichloroethane | 0.81 | 0.27 | 1.0 | J | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 96.4 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:13:16 PM | B86433 |
| Surr: Toluene-d8 | 95.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:13:16 PM | B86433 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.060 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 6:12:12 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:12:12 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/15/2022 4:05:27 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|--------------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: TOM | | | |
| Diesel Range Organics (DRO) | 0.071 | 0.016 | 0.064 | | mg/L | 1 | 3/11/2022 8:08:51 PM | 66084 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/11/2022 8:08:51 PM | 66084 |
| Surr: DNOP | 88.1 | 0 | 42.2-138 | | %Rec | 1 | 3/11/2022 8:08:51 PM | 66084 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: JME | | | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: Phenol-d5 | 1.98 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: 2,4,6-Tribromophenol | 52.6 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | S | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: 2-Fluorobiphenyl | 8.31 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| Surr: 4-Terphenyl-d14 | 79.2 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 2:57:27 PM | 66091 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | 2.4 | 0.048 | 1.0 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/16/2022 10:43:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.0 | 0 | 31.6-100 | | %Rec | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Surr: 2-Fluorobiphenyl | 61.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/16/2022 10:43:00 PM | 66057 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 72.3-147 | | %Rec | 1 | 3/16/2022 10:43:00 PM | 66057 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.012 | 0.00017 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Vanadium | 0.049 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:30:32 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Barium | 1.6 | 0.023 | 0.050 | | mg/L | 50 | 3/17/2022 3:37:53 PM | 66151 |
| Beryllium | 0.0022 | 0.0012 | 0.0050 | J | mg/L | 5 | 3/17/2022 6:17:12 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Chromium | 0.049 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Lead | 0.014 | 0.000061 | 0.00050 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Nickel | 0.035 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Selenium | 0.0027 | 0.00037 | 0.0010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Silver | 0.00033 | 0.00022 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| Zinc | 0.046 | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:30:16 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00042 | 0.000091 | 0.00020 | | mg/L | 1 | 3/16/2022 6:21:17 PM | 66216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022

Lab ID: 2203496-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0035 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/11/2022 12:18:31 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:18:31 PM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:18:31 PM | C86413 |
| Zinc | 0.0069 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:18:31 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:36:11 PM | A86624 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Barium | 0.12 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Chromium | 0.0015 | 0.00069 | 0.0050 | J | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/18/2022 1:41:43 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:16:46 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-8-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/8/2022 11:00:00 AM

Lab ID: 2203496-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 99.0 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 97.5 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:40:16 PM | B86433 |
| Surr: Toluene-d8 | 95.9 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 7:40:16 PM | B86433 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date:

Lab ID: 2203496-011A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Surr: 4-Bromofluorobenzene | 97.2 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 8:07:15 PM | B86433 |
| Surr: Toluene-d8 | 95.4 | 0 | 70-130 | | %Rec | 1 | 3/11/2022 8:07:15 PM | B86433 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203496

Date Reported: 3/23/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|---------------------------------|-------------------|------------|
| CLIENT: | Marathon | Client Sample ID: | Trip Blank |
| Project: | 2022 Quarterly Sampling 1st Qtr | Collection Date: | |
| Lab ID: | 2203496-011B | Matrix: | Trip Blank |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0094 | | µg/L | 1 | 3/15/2022 4:20:30 PM | 66148 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

March 17, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1469917

Samples Received: 03/10/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| |
|-----------------|
| ¹ Cp |
| ² Tc |
| ³ Ss |
| ⁴ Cn |
| ⁵ Sr |
| ⁶ Qc |
| ⁷ Gl |
| ⁸ Al |
| ⁹ Sc |

2203496-001F EB-3-8-22 L1469917-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:29 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203496-002F BW-5C L1469917-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:34 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-003F BW-5B L1469917-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:35 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-004F OW-50 L1469917-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:36 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-005F OW-52 L1469917-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:37 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-006F OW-29 L1469917-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:38 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-007F MKTF-43 L1469917-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1831850 | 1 | 03/14/22 21:54 | 03/16/22 13:39 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203496-008F OW-10 L1469917-08 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832545 | 1 | 03/15/22 16:11 | 03/16/22 11:56 | KEG | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

SAMPLE SUMMARY

2203496-009F DUP-3-8-22 L1469917-09 GW

Collected by
Collected date/time
Received date/time

03/08/22 00:00 03/10/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1832545 | 1 | 03/15/22 16:11 | 03/16/22 11:58 | KEG | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 03/08/22 08:20

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 13:29 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 13:34 | WG1831850 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 03/08/22 09:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 13:35 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 3.29 | J | 1.80 | 5.00 | 1 | 03/16/2022 13:36 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/08/22 09:50

L1469917

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 13:37 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 5.32 | | 1.80 | 5.00 | 1 | 03/16/2022 13:38 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 13:39 | WG1831850 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 11:56 | WG1832545 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/16/2022 11:58 | WG1832545 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3770448-1 03/16/22 13:08

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1469831-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1469831-05 03/16/22 13:14 • (DUP) R3770448-3 03/16/22 13:15

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1469832-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1469832-02 03/16/22 13:21 • (DUP) R3770448-6 03/16/22 13:22

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3770448-2 03/16/22 13:09

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 101 | 101 | 87.1-120 | |

L1469832-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1469832-01 03/16/22 13:16 • (MS) R3770448-4 03/16/22 13:17 • (MSD) R3770448-5 03/16/22 13:20

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 100 | 98.8 | 100 | 98.8 | 1 | 90.0-110 | | | 1.21 | 20 |

L1469917-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1469917-01 03/16/22 13:29 • (MS) R3770448-7 03/16/22 13:30 • (MSD) R3770448-8 03/16/22 13:33

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 92.1 | 98.8 | 92.1 | 98.8 | 1 | 90.0-110 | | | 7.02 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3770388-1 03/16/22 11:41

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Cyanide | U | | 1.80 | 5.00 |

L1469320-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1469320-02 03/16/22 11:47 • (DUP) R3770388-3 03/16/22 11:48

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1469917-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1469917-08 03/16/22 11:56 • (DUP) R3770388-6 03/16/22 11:57

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3770388-2 03/16/22 11:42

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Cyanide | 100 | 103 | 103 | 87.1-120 | |

L1469325-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1469325-02 03/16/22 11:49 • (MS) R3770388-4 03/16/22 11:50 • (MSD) R3770388-5 03/16/22 11:53

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 100 | U | 51.2 | 54.9 | 51.2 | 54.9 | 1 | 90.0-110 | J6 | J6 | 6.97 | 20 |

L1469917-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1469917-09 03/16/22 11:58 • (MS) R3770388-7 03/16/22 11:59 • (MSD) R3770388-8 03/16/22 12:00

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 100 | U | 92.2 | 96.9 | 92.2 | 96.9 | 1 | 90.0-110 | | | 4.97 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

| | |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Qc |
| 7 | Gl |
| 8 | Al |
| 9 | Sc |

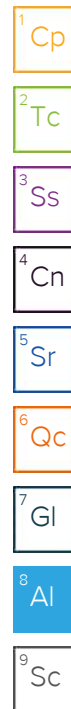
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

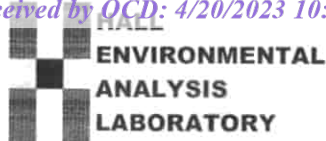
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

H227

| | | | | | | | | | | | | | | | |
|------------------|--|----------------------|--|-----------|--|---------|--|-------|--|----------------|--|-----|--|----------------|--|
| SUB CONTRACTOR | | Pace TN | | COMPANY | | PACE TN | | PHONE | | (800) 767-5859 | | FAX | | (615) 758-5859 | |
| ADDRESS | | 12065 Lebanon Rd | | ACCOUNT # | | | | EMAIL | | | | | | | |
| CITY, STATE, ZIP | | Mt. Juliet, TN 37122 | | | | | | | | | | | | L1469917 | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|---------------------|
| 1 | 2203496-001F | EB-3-8-22 | 500AMBHDP | Groundw | 3/8/2022 8:20:00 AM | 1 Cyanide | - 01 |
| 2 | 2203496-002F | BW-5C | 500AMBHDP | Groundw | 3/8/2022 8:20:00 AM | 1 Cyanide | - 02 |
| 3 | 2203496-003F | BW-5B | 500AMBHDP | Groundw | 3/8/2022 9:00:00 AM | 1 Cyanide | - 03 |
| 4 | 2203496-004F | OW-50 | 500AMBHDP | Groundw | 3/8/2022 9:25:00 AM | 1 Cyanide | - 04 |
| 5 | 2203496-005F | OW-52 | 500AMBHDP | Groundw | 3/8/2022 9:50:00 AM | 1 Cyanide | - 05 |
| 6 | 2203496-006F | OW-29 | 500AMBHDP | Groundw | 3/8/2022 10:15:00 AM | 1 Cyanide | - 06 |
| 7 | 2203496-007F | MKTF-43 | 500AMBHDP | Groundw | 3/8/2022 10:45:00 AM | 1 Cyanide | - 07 |
| 8 | 2203496-008F | OW-10 | 500AMBHDP | Groundw | 3/8/2022 11:00:00 AM | 1 Cyanide | - 08 |
| 9 | 2203496-009F | DUP-3-8-22 | 500AMBHDP | Groundw | 3/8/2022 | 1 Cyanide | - 09 |

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

5.8 + 0 = 5.8

Fedex: 5528 5947 9341

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

OK

| | | | | | | | | | |
|----------------------------|--|----------------|----------------|--|---------------|------------|--|--------|--|
| Relinquished By: <i>me</i> | | Date: 3/9/2022 | Time: 10:51 AM | Received By: <i>Olin</i> | Date: 3/10/22 | Time: 9:15 | REPORT TRANSMITTAL DESIRED: | | |
| Relinquished By: | | Date: | Time: | Received By: | Date: | Time: | HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE ☐ | | |
| Relinquished By: | | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | | |
| TAT: Standard <i>0</i> | | RUSH | | Next BD | | 2nd BD | | 3rd BD | |
| Temp of samples | | °C | | Attempt to Cool ☐ | | Comments | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: C86413 | | RunNo: 86413 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3048353 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LL LCS | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: C86413 | | RunNo: 86413 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3048354 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: C86413 | | RunNo: 86413 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3048355 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203496-001EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB-3-8-22 | Batch ID: C86413 | | RunNo: 86413 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3048463 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 70 | 130 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.4 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0.005351 | 97.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203496-001EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB-3-8-22 | Batch ID: C86413 | | RunNo: 86413 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3048464 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203496-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-3-8-22 | | Batch ID: C86413 | | RunNo: 86413 | | | | | | |
| Prep Date: | | Analysis Date: 3/11/2022 | | SeqNo: 3048464 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | 2.64 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | 2.62 | 20 | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | 1.20 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.005351 | 99.1 | 70 | 130 | 2.13 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66151 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052849 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |
| Silver | ND | 0.00050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66151 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052850 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|---------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 97.6 | 50 | 150 | | | J |
| Barium | 0.00085 | 0.0010 | 0.001000 | 0 | 85.5 | 50 | 150 | | | J |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.5 | 50 | 150 | | | J |
| Nickel | 0.00098 | 0.0010 | 0.001000 | 0 | 98.3 | 50 | 150 | | | J |
| Selenium | 0.00087 | 0.0010 | 0.001000 | 0 | 86.7 | 50 | 150 | | | J |
| Silver | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.2 | 50 | 150 | | | J |
| Zinc | 0.0099 | 0.010 | 0.01000 | 0 | 99.3 | 50 | 150 | | | J |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66151 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052851 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-66151 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 66151 | | RunNo: 86510 | | | | | | | |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | | SeqNo: 3052851 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.26 | 0.010 | 0.2500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66191 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055017 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |
| Silver | ND | 0.00050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLLCS-66191 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055018 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Barium | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Cadmium | 0.00047 | 0.00050 | 0.0005000 | 0 | 94.2 | 50 | 150 | | | J |
| Chromium | 0.0012 | 0.0010 | 0.001000 | 0 | 124 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Nickel | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Silver | 0.00053 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Zinc | 0.0097 | 0.010 | 0.01000 | 0 | 97.4 | 50 | 150 | | | J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: MSLCS-66191 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|-------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66191 | RunNo: 86564 | | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055019 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 85 | 115 | | | |
| Beryllium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 85 | 115 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 99.6 | 85 | 115 | | | |
| Chromium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.25 | 0.010 | 0.2500 | 0 | 101 | 85 | 115 | | | |

| Sample ID: 2203496-001DMSLL | SampType: MS | TestCode: EPA 200.8: Metals | | | | | | | | |
|------------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-3-8-22 | Batch ID: 66191 | RunNo: 86564 | | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055048 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | | | |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 70 | 130 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.5 | 70 | 130 | | | |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 96.6 | 70 | 130 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 92.9 | 70 | 130 | | | |
| Chromium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.6 | 70 | 130 | | | |
| Nickel | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Silver | 0.012 | 0.00050 | 0.01250 | 0 | 99.5 | 70 | 130 | | | |
| Zinc | 0.23 | 0.010 | 0.2500 | 0 | 93.1 | 70 | 130 | | | |

| Sample ID: 2203496-001DMSDL | SampType: MSD | TestCode: EPA 200.8: Metals | | | | | | | | |
|------------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: EB-3-8-22 | Batch ID: 66191 | RunNo: 86564 | | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055049 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 0.295 | 20 | |
| Vanadium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 2.93 | 20 | |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.1 | 70 | 130 | 2.33 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 70 | 130 | 1.54 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-------------|-------|----------|------|
| Sample ID: 2203496-001DMSDL | | SampType: MSD | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: EB-3-8-22 | | Batch ID: 66191 | | | RunNo: 86564 | | | | | |
| Prep Date: 3/15/2022 | | Analysis Date: 3/17/2022 | | | SeqNo: 3055049 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 96.2 | 70 | 130 | 0.435 | 20 | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | 0.528 | 22 | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 96.3 | 70 | 130 | 3.60 | 20 | |
| Chromium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 0.269 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.1 | 70 | 130 | 0.516 | 20 | |
| Nickel | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 0.811 | 20 | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 70 | 130 | 3.79 | 20 | |
| Silver | 0.012 | 0.00050 | 0.01250 | 0 | 97.2 | 70 | 130 | 2.33 | 20 | |
| Zinc | 0.23 | 0.010 | 0.2500 | 0 | 93.0 | 70 | 130 | 0.152 | 20 | |

| | | | | | | | | | | |
|--------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLLCS-66191 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 66191 | | | RunNo: 86564 | | | | | |
| Prep Date: 3/15/2022 | | Analysis Date: 3/17/2022 | | | SeqNo: 3055052 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00078 | 0.0010 | 0.001000 | 0 | 78.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2203496-004DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-50 | | Batch ID: 66191 | | RunNo: 86564 | | | | | | |
| Prep Date: 3/15/2022 | | Analysis Date: 3/17/2022 | | SeqNo: 3055055 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Vanadium | 0.030 | 0.0010 | 0.02500 | 0 | 119 | 70 | 130 | | | |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.6 | 70 | 130 | | | |
| Arsenic | 0.029 | 0.0010 | 0.02500 | 0.002159 | 107 | 70 | 130 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | | | |
| Cadmium | 0.010 | 0.00050 | 0.01250 | 0 | 83.4 | 70 | 130 | | | |
| Chromium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 85.3 | 70 | 130 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0.001317 | 99.8 | 70 | 130 | | | |
| Selenium | 0.029 | 0.0010 | 0.02500 | 0 | 115 | 70 | 130 | | | |
| Silver | 0.010 | 0.00050 | 0.01250 | 0 | 79.7 | 70 | 130 | | | |
| Zinc | 0.22 | 0.010 | 0.2500 | 0 | 88.7 | 70 | 130 | | | |

| | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--------------------------|-----|-----------|-------------|----------------|----------|-----------|-------------|----------|--------------|--|-----------------------------|--|--|--|--|
| Sample ID: 2203496-004DMSLL | | | | | | | | | | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: OW-50 | | Batch ID: 66191 | | | | RunNo: 86564 | | | | | | | | | | | |
| Prep Date: 3/15/2022 | | Analysis Date: 3/17/2022 | | | | SeqNo: 3055106 | | | Units: mg/L | | | | | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203496-004DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-50 | | Batch ID: 66191 | | RunNo: 86564 | | | | | | |
| Prep Date: 3/15/2022 | | Analysis Date: 3/17/2022 | | SeqNo: 3055106 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.076 | 0.0050 | 0.02500 | 0.05470 | 84.4 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051273 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051274 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 99.9 | 50 | 150 | | | J |
| Barium | 0.0010 | 0.0010 | 0.001000 | 0 | 100 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Chromium | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Lead | 0.00053 | 0.00050 | 0.0005000 | 0 | 105 | 50 | 150 | | | |
| Nickel | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051275 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 85 | 115 | | | |
| Beryllium | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.8 | 85 | 115 | | | |
| Nickel | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051334 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051335 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 115 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Barium | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 112 | 50 | 150 | | | |
| Nickel | 0.00091 | 0.0010 | 0.001000 | 0 | 90.7 | 50 | 150 | | | J |
| Selenium | 0.00087 | 0.0010 | 0.001000 | 0 | 87.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C86418 | RunNo: 86418 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3051336 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.8 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.5 | 85 | 115 | | | |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Beryllium | 0.024 | 0.0010 | 0.02500 | 0 | 96.4 | 85 | 115 | | | |
| Chromium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86537 | RunNo: 86537 | | | | | | | | |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053959 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------|---------------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: B86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053959 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cadmium | ND | 0.00050 |
| Lead | ND | 0.00050 |
| Nickel | ND | 0.0010 |
| Selenium | ND | 0.0010 |

| | | |
|---------------------------|---------------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BatchQC | Batch ID: B86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053960 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.0010 | 0.0010 0.001000 0 100 50 150 |
| Cadmium | 0.00049 | 0.00050 0.0005000 0 97.6 50 150 J |
| Lead | 0.00048 | 0.00050 0.0005000 0 96.2 50 150 J |
| Nickel | 0.00080 | 0.0010 0.001000 0 80.1 50 150 J |
| Selenium | 0.0010 | 0.0010 0.001000 0 102 50 150 |

| | | |
|------------------------|---------------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: LCSW | Batch ID: B86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053961 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.024 | 0.0010 0.02500 0 97.7 85 115 |
| Cadmium | 0.013 | 0.00050 0.01250 0 101 85 115 |
| Lead | 0.012 | 0.00050 0.01250 0 97.7 85 115 |
| Nickel | 0.025 | 0.0010 0.02500 0 98.6 85 115 |
| Selenium | 0.024 | 0.0010 0.02500 0 97.2 85 115 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2203496-001EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB-3-8-22 | Batch ID: B86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053973 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Selenium | 0.025 | 0.0010 0.02500 0 102 70 130 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2203496-001EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB-3-8-22 | Batch ID: B86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053974 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Selenium | 0.025 | 0.0010 0.02500 0 101 70 130 1.31 20 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|--|--------|---------------------------------|-----------|-------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: 2203496-005EMSL SampType: MS TestCode: EPA 200.8: Dissolved Metals | | | | | | | | | | |
| Client ID: OW-52 | | Batch ID: B86537 | | | RunNo: 86537 | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | | SeqNo: 3053984 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cadmium | 0.011 | 0.00050 | 0.01250 | 0 | 89.6 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 86.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: B86600 | | | RunNo: 86600 | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | | SeqNo: 3056942 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056943 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Barium | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 109 | 50 | 150 | | | |
| Nickel | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056944 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86600 | RunNo: 86600 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3056944 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 113 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203496-008EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: OW-10 | Batch ID: B86600 | RunNo: 86600 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3056955 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.13 | 0.0050 | 0.1250 | 0 | 104 | 70 | 130 | | | |
| Barium | 0.19 | 0.0050 | 0.1250 | 0.05110 | 110 | 70 | 130 | | | |
| Beryllium | 0.12 | 0.0050 | 0.1250 | 0 | 93.2 | 70 | 130 | | | |
| Cadmium | 0.058 | 0.0025 | 0.06250 | 0 | 93.4 | 70 | 130 | | | |
| Chromium | 0.13 | 0.0050 | 0.1250 | 0 | 105 | 70 | 130 | | | |
| Lead | 0.058 | 0.0025 | 0.06250 | 0 | 93.0 | 70 | 130 | | | |
| Nickel | 0.13 | 0.0050 | 0.1250 | 0 | 104 | 70 | 130 | | | |
| Selenium | 0.13 | 0.0050 | 0.1250 | 0.009469 | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2203496-008EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: OW-10 | Batch ID: B86600 | RunNo: 86600 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3056956 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.13 | 0.0050 | 0.1250 | 0 | 104 | 70 | 130 | 0.151 | 20 | |
| Barium | 0.18 | 0.0050 | 0.1250 | 0.05110 | 105 | 70 | 130 | 3.32 | 20 | |
| Beryllium | 0.12 | 0.0050 | 0.1250 | 0 | 95.6 | 70 | 130 | 2.53 | 20 | |
| Cadmium | 0.061 | 0.0025 | 0.06250 | 0 | 97.6 | 70 | 130 | 4.42 | 20 | |
| Chromium | 0.13 | 0.0050 | 0.1250 | 0 | 102 | 70 | 130 | 2.57 | 20 | |
| Lead | 0.059 | 0.0025 | 0.06250 | 0 | 93.9 | 70 | 130 | 0.939 | 20 | |
| Nickel | 0.13 | 0.0050 | 0.1250 | 0 | 103 | 70 | 130 | 0.468 | 20 | |
| Selenium | 0.14 | 0.0050 | 0.1250 | 0.009469 | 104 | 70 | 130 | 4.62 | 20 | |

| | | | | | | | | | | |
|----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203496-009EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: DUP-3-8-22 | Batch ID: B86600 | RunNo: 86600 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3056958 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.14 | 0.0050 | 0.1250 | 0 | 109 | 70 | 130 | | | |
| Barium | 0.24 | 0.0050 | 0.1250 | 0.1185 | 97.9 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203496-009EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: DUP-3-8-22 | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056958 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.12 | 0.0050 | 0.1250 | 0 | 97.7 | 70 | 130 | | | |
| Cadmium | 0.055 | 0.0025 | 0.06250 | 0 | 88.0 | 70 | 130 | | | |
| Chromium | 0.13 | 0.0050 | 0.1250 | 0.001466 | 104 | 70 | 130 | | | |
| Lead | 0.057 | 0.0025 | 0.06250 | 0 | 91.5 | 70 | 130 | | | |
| Nickel | 0.13 | 0.0050 | 0.1250 | 0 | 103 | 70 | 130 | | | |
| Selenium | 0.14 | 0.0050 | 0.1250 | 0 | 109 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058028 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058029 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 115 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058030 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66216 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66216 | RunNo: 86530 |
| Prep Date: 3/16/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053603 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-66216 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66216 | RunNo: 86530 |
| Prep Date: 3/16/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053604 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00015 | 0.00020 0.0001500 0 96.8 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66216 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66216 | RunNo: 86530 |
| Prep Date: 3/16/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053605 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0048 | 0.00020 0.005000 0 95.1 85 115 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2203496-005DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-52 | Batch ID: 66216 | RunNo: 86530 |
| Prep Date: 3/16/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053636 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.5 75 125 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2203496-005DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-52 | Batch ID: 66216 | RunNo: 86530 |
| Prep Date: 3/16/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053637 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 97.8 75 125 0.667 20 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66259 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66259 | RunNo: 86582 |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055992 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-66259 | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | Batch ID: 66259 | | RunNo: 86582 | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | | SeqNo: 3055993 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00021 | 0.00020 | 0.0001500 | 0 | 143 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66259 | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: LCSW | Batch ID: 66259 | | RunNo: 86582 | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | | SeqNo: 3055994 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 107 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66148 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66148 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052008 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66148 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66148 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052011 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66148 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66148 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052107 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.092 | 0.010 0.1000 0 92.0 70 130 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66084 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 66084 | | RunNo: 86400 | | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/11/2022 | | SeqNo: 3049367 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.030 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.039 | | 0.03750 | | 103 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66084 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 66084 | | RunNo: 86400 | | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/11/2022 | | SeqNo: 3049368 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 60.0 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.019 | | 0.01875 | | 102 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: LCSD-66084 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66084 | | RunNo: 86400 | | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/11/2022 | | SeqNo: 3049369 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 59.7 | 31.7 | 75.4 | 0.465 | 20 | |
| Surr: DNOP | 0.019 | | 0.01875 | | 101 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: B86433 | | RunNo: 86433 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3049425 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 93.0 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 93.8 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 91.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.3 | | 10.00 | | 92.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203496-002a ms | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: BW-5C | Batch ID: B86433 | | RunNo: 86433 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3049440 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 91.8 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 97.7 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203496-002a msd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: BW-5C | Batch ID: B86433 | | RunNo: 86433 | | | | | | | |
| Prep Date: | Analysis Date: 3/12/2022 | | SeqNo: 3049441 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 115 | 70 | 130 | 0.590 | 20 | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 89.7 | 70 | 130 | 2.34 | 20 | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 92.6 | 70 | 130 | 5.38 | 20 | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | 0.872 | 20 | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.1 | 70 | 130 | 1.96 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 109 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 97.1 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 108 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.8 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B86433 | | | RunNo: 86433 | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | | SeqNo: 3049453 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 99.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 92.1 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: B86459 | RunNo: 86459 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3050525 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: B86459 | RunNo: 86459 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3050554 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R86565 | RunNo: 86565 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3055126 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 97.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R86565 | RunNo: 86565 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3055141 | Units: %Rec | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.2 | | 10.00 | | 91.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: MB-66091 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66091 | | | RunNo: 86487 | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/15/2022 | | | SeqNo: 3051811 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.4 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 68 | | 200.0 | | 34.0 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.9 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 52.0 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 86.8 | 48 | 155 | | | |

| Sample ID: LCS-66091 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66091 | | | RunNo: 86487 | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/15/2022 | | | SeqNo: 3051812 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 37 | 5.0 | 100.0 | 0 | 36.6 | 15 | 87.6 | | | |
| Phenol | 56 | 5.0 | 200.0 | 0 | 27.8 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 69 | | 200.0 | | 34.4 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 54 | | 200.0 | | 27.2 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 51.5 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 45.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 47 | | 100.0 | | 47.2 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 85.3 | 48 | 155 | | | |

| Sample ID: LCSD-66091 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66091 | | | RunNo: 86487 | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/15/2022 | | | SeqNo: 3051813 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: LCSD-66091 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66091 | | RunNo: 86487 | | | | | | | |
| Prep Date: 3/10/2022 | Analysis Date: 3/15/2022 | | SeqNo: 3051813 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 47.3 | 15 | 87.6 | 25.6 | 30.4 | |
| Phenol | 62 | 5.0 | 200.0 | 0 | 31.2 | 16.8 | 70.5 | 11.4 | 37.2 | |
| Surr: 2-Fluorophenol | 81 | | 200.0 | | 40.7 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 64 | | 200.0 | | 32.1 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 56.5 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 50.7 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 52 | | 100.0 | | 52.3 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 79 | | 100.0 | | 79.4 | 48 | 155 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: mb-66057 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
|----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: 66057 | | RunNo: 86533 | | | | | | |
| Prep Date: 3/9/2022 | | Analysis Date: 3/16/2022 | | SeqNo: 3053769 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 1.6 | | 4.000 | | 39.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 3.0 | | 8.000 | | 37.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 1.2 | | 4.000 | | 29.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 4.1 | | 4.000 | | 103 | 72.3 | 147 | | | |

| Sample ID: lcs-66057 | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | | Batch ID: 66057 | | RunNo: 86533 | | | | | | |
| Prep Date: 3/9/2022 | | Analysis Date: 3/16/2022 | | SeqNo: 3053770 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.74 | 0.10 | 2.000 | 0 | 37.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.84 | 0.10 | 2.000 | 0 | 42.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.86 | 0.10 | 2.000 | 0 | 43.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.82 | 0.10 | 2.000 | 0 | 41.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 59.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 65.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.5 | 0.10 | 2.000 | 0 | 75.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 52.9 | 123 | | | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 82.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.8 | 0.10 | 2.000 | 0 | 91.0 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 3.7 | | 5.000 | | 73.6 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66057 | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 66057 | | RunNo: 86533 | | | | | | | |
| Prep Date: 3/9/2022 | Analysis Date: 3/16/2022 | | SeqNo: 3053770 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 5.7 | | 10.00 | | 56.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 3.5 | | 5.000 | | 70.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 6.1 | | 5.000 | | 122 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66057 | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66057 | | RunNo: 86533 | | | | | | | |
| Prep Date: 3/9/2022 | Analysis Date: 3/16/2022 | | SeqNo: 3053771 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.58 | 0.10 | 2.000 | 0 | 29.0 | 20.2 | 48.4 | 24.2 | 30.1 | |
| Naphthalene | 0.56 | 0.10 | 2.000 | 0 | 28.0 | 21.3 | 79.9 | 40.0 | 25.6 | R |
| 1-Methylnaphthalene | 0.58 | 0.10 | 2.000 | 0 | 29.0 | 22.2 | 80.3 | 38.9 | 25 | R |
| 2-Methylnaphthalene | 0.56 | 0.10 | 2.000 | 0 | 28.0 | 20.6 | 80.1 | 37.7 | 25 | R |
| Acenaphthene | 0.86 | 0.10 | 2.000 | 0 | 43.0 | 29.8 | 82.7 | 31.4 | 27.8 | R |
| Fluorene | 1.0 | 0.10 | 2.000 | 0 | 50.0 | 33.3 | 86 | 26.1 | 26.4 | |
| Phenanthrene | 1.2 | 0.10 | 2.000 | 0 | 60.0 | 38.2 | 93.9 | 22.2 | 27.9 | |
| Anthracene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 41.1 | 95.6 | 24.6 | 25.6 | |
| Fluoranthene | 1.5 | 0.20 | 2.000 | 0 | 73.0 | 52.9 | 123 | 12.8 | 22.8 | |
| Pyrene | 1.5 | 0.20 | 2.000 | 0 | 75.0 | 51 | 113 | 8.92 | 20 | |
| Benz(a)anthracene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 51 | 147 | 4.49 | 24.1 | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 92.0 | 55.3 | 115 | 6.74 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.10 | 2.000 | 0 | 89.0 | 44.4 | 136 | 3.43 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.4 | 165 | 1.06 | 21.1 | |
| Surr: Nitrobenzene-d5 | 2.9 | | 5.000 | | 58.0 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 4.5 | | 10.00 | | 45.0 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 2.6 | | 5.000 | | 51.2 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 6.3 | | 5.000 | | 126 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203496

23-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A86433 | | RunNo: 86433 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3049397 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A86433 | | RunNo: 86433 | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | | SeqNo: 3049422 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 96.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055144 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.43 | 0.050 | 0.5000 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203496-001ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-3-8-22 | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055146 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.42 | 0.050 | 0.5000 | 0 | 84.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203496-001amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-3-8-22 | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055147 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.42 | 0.050 | 0.5000 | 0 | 83.4 | 70 | 130 | 6.90 | 20 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055166 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.042 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203496

RcptNo: 1

Received By: Tracy Casarrubias 3/9/2022 8:00:00 AM

Completed By: Tracy Casarrubias 3/9/2022 8:25:26 AM

Reviewed By: *sa 3/9/22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

18 9

(<2 or >12 unless noted)

Adjusted?

KPG 3/9/22 yes

Checked by:

KPG 3/9/22

Labeled by: JIR 3/9/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

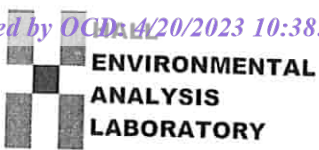
Regarding: _____

Client Instructions: _____

16. Additional remarks: *Added 0.5 ml of HNO_3 to sample 006D for proper pH <2 - KPG 3/9/22*

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.1 | Good | Yes | | | |
| 2 | 1.6 | Good | Yes | | | |
| 3 | 0 | Good | Yes | | | |
| 4 | 0.1 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

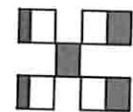
Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203496

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 1.0 | Good | Yes | | | |



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| | | | |
|-----------------------------|--|---|---|
| Client: | Marathon Gallup Refinery | X Standard | Rush |
| Mailing Address: | 92 Giant Crossing Road
Jamestown, NM, 87347
808-640-1823 | Project Name:
2022 GW Sampling 1st Quarter
Project #: 697-080-001 | |
| Phone #: | | Project Manager:
Lesli Alexander/Mackensie Swift | |
| mail or Fax#: | | | |
| A/QC Package: | ☐ Level 4 (Full Validation) | | |
| Standard | ☐ Az Compliance
☐ NELAC
☐ Other | | |
| Accreditation: | ☐ Level 4 (Full Validation) | | |
| EDD (Type) | | | |
| Sampler: | Hilarie Trejo | On Ice: | ☒ Yes ☐ No |
| # of Coolers: | 5 | | |
| Cooler Temp (including CF): | See Remarks | | |
| Container Type and # | Preservative Type | HEAL No. | |
| 3/8/2022 8:20 | GW | EB-3-8-22 | 13 |
| 3/8/2022 8:20 | GW | BLW-5C | 13 |
| 3/8/2022 9:00 | GW | BLW-5B | 13 |
| 3/8/2022 9:25 | GW | OLW-50 | 13 |
| 3/8/2022 9:50 | GW | OLW-52 | 13 |
| 3/8/2022 10:15 | GW | OLW-29 | 13 |
| 3/8/2022 10:45 | GW | MWTF-43 | 13 |
| 3/8/2022 11:00 | GW | OLW-10 | 13 |
| 3/8/2022 11:00 | GW | OLW-3-8-22 | 13 |
| 3/8/2022 11:00 | water | FB 3-8-22 | 2 |
| 3/8/2022 11:00 | | Trip Blank | |
| Date | Time | Matrix | Sample Name |
| 3-8-22 | 1:00 | Relinquished by: Hilarie Trejo | Relinquished by: Hilarie Trejo |
| Date: | Time: | Relinquished by: | Relinquished by: |

1.) 0.1 - 0.1 = 0.1
 2.) 1.0 - 0.1 = 1.0
 3.) 0.1 - 0.1 = 0
 4.) 0.1 - 0.1 = 0.1
 5.) 1.0 - 0.1 = 1.0

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 21, 2022

Brian McLoughlin
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2022 GW Sampling 1St Quarter

OrderNo.: 2203571

Dear Brian McLoughlin:

Hall Environmental Analysis Laboratory received 3 sample(s) on 3/10/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2203571
Date Reported: 3/21/2022

| | | | | | |
|---------------------------------------|--|------------------|--------------------------------------|--|--|
| CLIENT: Marathon | | | Client Sample ID: MKTF-41 | | |
| Project: 2022 GW Sampling 1St Quarter | | | Collection Date: 3/9/2022 9:35:00 AM | | |
| Lab ID: 2203571-001 | | Matrix: GROUNDWA | Received Date: 3/10/2022 8:00:00 AM | | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM 2540D: TSS | | | | | | | Analyst: KS | |
| Suspended Solids | ND | 4.0 | 4.0 | | mg/L | 1 | 3/17/2022 7:22:00 AM | 66210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2203571
Date Reported: 3/21/2022

| | | | | | |
|---------------------------------------|--|------------------|---------------------------------------|--|--|
| CLIENT: Marathon | | | Client Sample ID: MKTF-32 | | |
| Project: 2022 GW Sampling 1St Quarter | | | Collection Date: 3/9/2022 10:00:00 AM | | |
| Lab ID: 2203571-002 | | Matrix: GROUNDWA | Received Date: 3/10/2022 8:00:00 AM | | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM 2540D: TSS | | | | | | | Analyst: KS | |
| Suspended Solids | 91 | 4.0 | 4.0 | | mg/L | 1 | 3/17/2022 7:22:00 AM | 66210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2203571
Date Reported: 3/21/2022

| | |
|---------------------------------------|--|
| CLIENT: Marathon | Client Sample ID: MKTF-34 |
| Project: 2022 GW Sampling 1St Quarter | Collection Date: 3/9/2022 10:20:00 AM |
| Lab ID: 2203571-003 | Matrix: GROUNDWA Received Date: 3/10/2022 8:00:00 AM |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------|--------|-----|-----|------|-------|----|----------------------|-------------|
| SM 2540D: TSS | | | | | | | | Analyst: KS |
| Suspended Solids | 27 | 4.0 | 4.0 | | mg/L | 1 | 3/17/2022 7:22:00 AM | 66210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203571
21-Mar-22

Client: Marathon
Project: 2022 GW Sampling 1St Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66210 | SampType: MBLK | TestCode: SM 2540D: TSS |
| Client ID: PBW | Batch ID: 66210 | RunNo: 86525 |
| Prep Date: 3/16/2022 | Analysis Date: 3/17/2022 | SeqNo: 3053365 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Suspended Solids | ND | 4.0 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66210 | SampType: LCS | TestCode: SM 2540D: TSS |
| Client ID: LCSW | Batch ID: 66210 | RunNo: 86525 |
| Prep Date: 3/16/2022 | Analysis Date: 3/17/2022 | SeqNo: 3053366 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Suspended Solids | 92 | 4.0 92.40 0 99.6 83.44 119.05 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 4 of 4



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203571

RcptNo: 1

Received By: Cheyenne Cason 3/10/2022 8:00:00 AM

Completed By: Cheyenne Cason 3/10/2022 8:35:08 AM

Reviewed By: TMC 3/10/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by: Chc 3/10/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.8 | Good | Yes | | | |
| 2 | 3.5 | Good | Yes | | | |
| 3 | 0.9 | Good | Yes | | | |
| 4 | 0.9 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 24, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 Quarterly Sampling 1st Qtr

OrderNo.: 2203574

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 3/10/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Case Narrative

WO#: 2203574
Date: 3/24/2022

CLIENT: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270 and EPA Method 8015D:
"S" flagged surrogates are due to sample dilution and/or matrix interferences.

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 9.5 | 0.23 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Toluene | 0.43 | 0.20 | 1.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Ethylbenzene | 1.2 | 0.21 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | 1.2 | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,2,4-Trimethylbenzene | 6.3 | 0.12 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,3,5-Trimethylbenzene | 2.1 | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,2-Dichloroethane (EDC) | 1.3 | 0.25 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Chloromethane | 0.68 | 0.41 | 3.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,1-Dichloroethane | 0.68 | 0.27 | 1.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,1-Dichloroethene | 1.1 | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Isopropylbenzene | 1.5 | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 4-Isopropyltoluene | 0.37 | 0.20 | 1.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| n-Butylbenzene | 0.46 | 0.25 | 3.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| n-Propylbenzene | 1.6 | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| sec-Butylbenzene | 0.38 | 0.14 | 1.0 | J | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Xylenes, Total | 26 | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 91.0 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Surr: Dibromofluoromethane | 93.0 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:40:56 PM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.21 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 6:40:56 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 6:40:56 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | 0.12 | 0.035 | 0.095 | D | µg/L | 10 | 3/17/2022 11:28:00 AM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 23 | 0.32 | 1.3 | | mg/L | 20 | 3/15/2022 11:52:48 AM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 1.0 | 1.6 | D | mg/L | 20 | 3/15/2022 11:52:48 AM | 66129 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 20 | 3/15/2022 11:52:48 AM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 11 | 200 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 45 | 100 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Di-n-butyl phthalate | ND | 65 | 100 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Di-n-octyl phthalate | ND | 31 | 200 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 7.0 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Diethyl phthalate | ND | 39 | 100 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Dimethyl phthalate | ND | 20 | 100 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 2,4-Dimethylphenol | ND | 9.7 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 2,4-Dinitrophenol | ND | 5.0 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 2-Methylphenol | ND | 5.1 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 3+4-Methylphenol | ND | 4.5 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Phenol | ND | 3.3 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Pyridine | ND | 100 | 100 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 4.3 | 50 | D | µg/L | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 3/16/2022 3:40:23 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.95 | 20 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Naphthalene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Acenaphthene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Fluorene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Phenanthrene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Anthracene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Fluoranthene | ND | 2.0 | 4.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Pyrene | ND | 3.2 | 4.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.73 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Chrysene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.87 | 6.0 | D | µg/L | 20 | 3/17/2022 4:40:00 PM | 66214 |

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Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 20 | 3/17/2022 4:40:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 20 | 3/17/2022 4:40:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
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Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00028 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Vanadium | 0.060 | 0.0029 | 0.0050 | | mg/L | 5 | 3/21/2022 2:22:30 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Arsenic | 0.0024 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Barium | 0.059 | 0.0023 | 0.0050 | | mg/L | 5 | 3/15/2022 7:44:55 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Chromium | 0.0096 | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Lead | 0.00025 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Nickel | 0.00063 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Selenium | 0.00099 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 3:40:20 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000092 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:18:56 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-42

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:00:00 AM

Lab ID: 2203574-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:26:45 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:26:45 PM | C86413 |
| Vanadium | 0.058 | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:26:45 PM | C86413 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:26:45 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:38:52 PM | A86624 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Barium | 0.054 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 1:55:11 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Chromium | 0.00030 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| Selenium | 0.00083 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/18/2022 1:52:29 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000092 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:21:07 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.35 | 0.23 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Ethylbenzene | 0.80 | 0.21 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | 0.56 | 0.39 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,2,4-Trimethylbenzene | 2.2 | 0.12 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,3,5-Trimethylbenzene | 0.91 | 0.18 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,2-Dichloroethane (EDC) | 2.1 | 0.25 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,1-Dichloroethane | 1.9 | 0.27 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,1-Dichloroethene | 4.1 | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Isopropylbenzene | 0.18 | 0.18 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| n-Propylbenzene | 0.34 | 0.18 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Trichloroethene (TCE) | 0.35 | 0.20 | 1.0 | J | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Xylenes, Total | 6.6 | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 89.4 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 98.2 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Surr: Dibromofluoromethane | 95.3 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 8:07:21 PM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.085 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 8:07:21 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 8:07:21 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.094 | D | µg/L | 10 | 3/17/2022 11:58:09 AM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.7 | 0.016 | 0.064 | | mg/L | 1 | 3/15/2022 12:16:54 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 12:16:54 PM | 66129 |
| Surr: DNOP | 93.7 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 12:16:54 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: 2-Fluorophenol | 31.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: Phenol-d5 | 24.8 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 77.7 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: Nitrobenzene-d5 | 42.4 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 40.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 75.3 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 4:23:30 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.95 | 20 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Naphthalene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Acenaphthene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Fluorene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Phenanthrene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Anthracene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Fluoranthene | ND | 2.0 | 4.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Pyrene | ND | 3.2 | 4.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.73 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Chrysene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.87 | 6.0 | D | µg/L | 20 | 3/17/2022 5:25:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 20 | 3/17/2022 5:25:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 20 | 3/17/2022 5:25:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Vanadium | 0.034 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:42:46 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Arsenic | 0.0021 | 0.00013 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Barium | 0.063 | 0.0023 | 0.0050 | | mg/L | 5 | 3/17/2022 3:45:13 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Chromium | 0.0013 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Lead | 0.000066 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Selenium | 0.037 | 0.00037 | 0.0010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/15/2022 7:47:22 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:23:15 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 9:35:00 AM

Lab ID: 2203574-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:30:02 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:30:02 PM | C86413 |
| Vanadium | 0.030 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 12:30:02 PM | C86413 |
| Zinc | 0.0097 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:30:02 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 4:46:57 PM | A86624 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Barium | 0.066 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 2:00:33 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Chromium | 0.0013 | 0.00014 | 0.0010 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| Selenium | 0.037 | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 1:57:52 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:29:36 PM | 66259 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.45 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Ethylbenzene | ND | 0.43 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | 870 | 7.9 | 20 | | µg/L | 20 | 3/17/2022 8:36:06 PM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.24 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,2-Dichloroethane (EDC) | 9.5 | 0.51 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.61 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Chloromethane | 1.3 | 0.82 | 6.0 | J | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| cis-1,2-DCE | 2.0 | 0.78 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,1-Dichloroethane | 8.4 | 0.55 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,1-Dichloroethene | 18 | 0.40 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Isopropylbenzene | ND | 0.37 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| n-Propylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| sec-Butylbenzene | 0.33 | 0.29 | 2.0 | J | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Trichloroethene (TCE) | 0.52 | 0.41 | 2.0 | J | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Xylenes, Total | ND | 0.74 | 3.0 | | µg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 92.3 | 0 | 70-130 | | %Rec | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 98.4 | 0 | 70-130 | | %Rec | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Surr: Dibromofluoromethane | 94.3 | 0 | 70-130 | | %Rec | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 2 | 3/17/2022 9:04:48 PM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 1.1 | 0.024 | 0.10 | | mg/L | 2 | 3/17/2022 9:04:48 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 2 | 3/17/2022 9:04:48 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|--|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E Estimated value |
| H | Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.094 | D | µg/L | 10 | 3/17/2022 12:28:11 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.23 | 0.016 | 0.064 | | mg/L | 1 | 3/15/2022 12:41:06 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 12:41:06 PM | 66129 |
| Surr: DNOP | 95.4 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 12:41:06 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: 2-Fluorophenol | 35.5 | 0 | 29.4-87.7 | | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: Phenol-d5 | 27.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 72.5 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: Nitrobenzene-d5 | 43.7 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 43.4 | 0 | 38.1-99.9 | | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 83.4 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 5:06:36 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 34 | 0.48 | 10 | | µg/L | 10 | 3/21/2022 7:40:00 PM | 66214 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 6:11:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.5 | 0 | 31.6-100 | | %Rec | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 56.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/17/2022 6:11:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 106 | 0 | 72.3-147 | | %Rec | 1 | 3/17/2022 6:11:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00072 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Vanadium | 0.011 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:47:39 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Arsenic | 0.0028 | 0.00013 | 0.0010 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Barium | 0.069 | 0.0023 | 0.0050 | | mg/L | 5 | 3/17/2022 3:50:05 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Chromium | 0.0014 | 0.00056 | 0.0010 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Lead | 0.00095 | 0.000061 | 0.00050 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Nickel | 0.0047 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Selenium | 0.00041 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| Zinc | 0.0047 | 0.0038 | 0.010 | J | mg/L | 1 | 3/15/2022 7:54:43 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000098 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:35:59 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:00:00 AM

Lab ID: 2203574-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:33:20 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:33:20 PM | C86413 |
| Vanadium | 0.0063 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 12:33:20 PM | C86413 |
| Zinc | 0.0046 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:33:20 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 4:49:38 PM | A86624 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Barium | 0.056 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 2:05:56 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Chromium | 0.00023 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Lead | 0.000095 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Nickel | 0.0033 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 2:03:15 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:38:07 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-34

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:20:00 AM

Lab ID: 2203574-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 5.3 | 0.23 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Toluene | 1.5 | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,2,4-Trimethylbenzene | 0.40 | 0.12 | 1.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,2-Dichloroethane (EDC) | 0.54 | 0.25 | 1.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Acetone | 16 | 2.5 | 10 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 2-Butanone | 6.8 | 2.0 | 10 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Chloroform | 10 | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,1-Dichloroethane | 0.55 | 0.27 | 1.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,1-Dichloroethene | 0.57 | 0.20 | 1.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Methylene Chloride | 1.1 | 0.50 | 3.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Trichloroethene (TCE) | 0.69 | 0.20 | 1.0 | J | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Xylenes, Total | 4.9 | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 93.2 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 99.9 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Surr: Dibromofluoromethane | 93.0 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Surr: Toluene-d8 | 111 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 9:33:30 PM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 1.1 | 0.012 | 0.050 | | mg/L | 1 | 3/17/2022 9:33:30 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 9:33:30 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-34**Project:** 2022 Quarterly Sampling 1st Qtr**Collection Date:** 3/9/2022 10:20:00 AM**Lab ID:** 2203574-004B**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------------|--------|-------|-------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.035 | 0.094 | D | µg/L | 10 | 3/17/2022 12:58:19 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-34

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:20:00 AM

Lab ID: 2203574-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.19 | 0.016 | 0.064 | | mg/L | 1 | 3/15/2022 1:05:20 PM | 66129 |
| Motor Oil Range Organics (MRO) | 0.20 | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 1:05:20 PM | 66129 |
| Surr: DNOP | 81.4 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 1:05:20 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | 6.2 | 4.5 | 10 | J | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: Phenol-d5 | 5.83 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 55.2 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: Nitrobenzene-d5 | 40.1 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 35.8 | 0 | 38.1-99.9 | S | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 77.4 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 5:49:36 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 6:56:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-34

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:20:00 AM

Lab ID: 2203574-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 46.5 | 0 | 31.6-100 | | %Rec | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 34.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/17/2022 6:56:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 96.5 | 0 | 72.3-147 | | %Rec | 1 | 3/17/2022 6:56:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-34

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:20:00 AM

Lab ID: 2203574-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0077 | 0.00017 | 0.0010 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Vanadium | 0.0023 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:52:32 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Arsenic | 0.0030 | 0.00013 | 0.0010 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Barium | 0.17 | 0.0023 | 0.0050 | | mg/L | 5 | 3/17/2022 6:19:39 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Chromium | 0.00074 | 0.00056 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Lead | 0.0037 | 0.000061 | 0.00050 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Nickel | 0.0044 | 0.00048 | 0.0010 | | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Selenium | 0.00072 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Silver | 0.00041 | 0.00022 | 0.00050 | J | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| Zinc | 0.0086 | 0.0038 | 0.010 | J | mg/L | 1 | 3/15/2022 7:57:09 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00046 | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:40:15 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-34

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:20:00 AM

Lab ID: 2203574-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0080 | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:36:39 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:36:39 PM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:36:39 PM | C86413 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:36:39 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:52:20 PM | A86624 |
| Arsenic | 0.0020 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Barium | 0.18 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Chromium | ND | 0.00069 | 0.0050 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Lead | 0.0014 | 0.00028 | 0.0025 | J | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/18/2022 2:08:37 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00023 | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:42:23 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Chloromethane | 0.80 | 0.41 | 3.0 | J | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 89.8 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 98.0 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Surr: Dibromofluoromethane | 94.3 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:02:13 PM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.041 | 0.012 | 0.050 | J | mg/L | 1 | 3/17/2022 10:02:13 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:02:13 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.094 | D | µg/L | 10 | 3/17/2022 1:28:28 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | J | mg/L | 1 | 3/15/2022 1:29:16 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 1:29:16 PM | 66129 |
| Surr: DNOP | 92.2 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 1:29:16 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: 2-Fluorophenol | 35.7 | 0 | 29.4-87.7 | | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: Phenol-d5 | 27.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 53.6 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: Nitrobenzene-d5 | 45.0 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 40.7 | 0 | 38.1-99.9 | | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 86.0 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 6:32:11 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 7:42:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 55.0 | 0 | 31.6-100 | | %Rec | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 37.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/17/2022 7:42:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 97.0 | 0 | 72.3-147 | | %Rec | 1 | 3/17/2022 7:42:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Vanadium | 0.0038 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Barium | 0.011 | 0.00046 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Nickel | 0.00097 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Selenium | 0.0012 | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| Zinc | 0.0080 | 0.0038 | 0.010 | J | mg/L | 1 | 3/17/2022 3:57:25 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:44:32 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0032 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/11/2022 12:39:28 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:39:28 PM | C86413 |
| Vanadium | 0.0026 | 0.0017 | 0.050 | J | mg/L | 1 | 3/11/2022 12:39:28 PM | C86413 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:39:28 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Arsenic | 0.0037 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Barium | 0.013 | 0.0023 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Chromium | ND | 0.00069 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 4:55:01 PM | A86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000093 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:46:42 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:35:00 AM

Lab ID: 2203574-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Carbon disulfide | 0.68 | 0.59 | 10 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Chloromethane | 0.71 | 0.41 | 3.0 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Methylene Chloride | 0.53 | 0.50 | 3.0 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Trichloroethene (TCE) | 0.22 | 0.20 | 1.0 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Vinyl chloride | 0.46 | 0.32 | 1.0 | J | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 89.7 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 99.2 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Surr: Dibromofluoromethane | 93.7 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 1:22:05 AM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.042 | 0.012 | 0.050 | J | mg/L | 1 | 3/18/2022 1:22:05 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 1:22:05 AM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:35:00 AM

Lab ID: 2203574-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.093 | D | µg/L | 10 | 3/17/2022 1:58:43 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:35:00 AM

Lab ID: 2203574-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 3/15/2022 1:52:55 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 1:52:55 PM | 66129 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 1:52:55 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: 2-Fluorophenol | 37.6 | 0 | 29.4-87.7 | | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: Phenol-d5 | 28.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 57.0 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: Nitrobenzene-d5 | 45.5 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 46.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 88.7 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 7:14:55 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 8:26:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** PW-4**Project:** 2022 Quarterly Sampling 1st Qtr**Collection Date:** 3/9/2022 8:35:00 AM**Lab ID:** 2203574-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.5 | 0 | 31.6-100 | | %Rec | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 34.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/17/2022 8:26:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 89.5 | 0 | 72.3-147 | | %Rec | 1 | 3/17/2022 8:26:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:35:00 AM

Lab ID: 2203574-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Vanadium | 0.0012 | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Arsenic | 0.0019 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Barium | 0.012 | 0.00046 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Selenium | 0.0013 | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| Zinc | 0.014 | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 3:59:51 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:48:51 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:35:00 AM

Lab ID: 2203574-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0025 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/11/2022 12:47:48 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:47:48 PM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:47:48 PM | C86413 |
| Zinc | 0.022 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:47:48 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Arsenic | 0.00094 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Barium | 0.012 | 0.0023 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Chromium | ND | 0.00069 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 4:57:42 PM | A86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000093 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:51:02 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022

Lab ID: 2203574-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 21 | 0.45 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Toluene | 1.2 | 0.40 | 2.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Ethylbenzene | 2.7 | 0.43 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Methyl tert-butyl ether (MTBE) | 2.5 | 0.79 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,2,4-Trimethylbenzene | 13 | 0.24 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,3,5-Trimethylbenzene | 4.6 | 0.36 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,2-Dichloroethane (EDC) | 2.6 | 0.51 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.61 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Chloromethane | 1.3 | 0.82 | 6.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| cis-1,2-DCE | ND | 0.78 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,1-Dichloroethane | 1.4 | 0.55 | 2.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,1-Dichloroethene | 2.6 | 0.40 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Isopropylbenzene | 3.3 | 0.37 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 4-Isopropyltoluene | 0.84 | 0.40 | 2.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| n-Butylbenzene | 1.2 | 0.51 | 6.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| n-Propylbenzene | 3.5 | 0.36 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| sec-Butylbenzene | 0.85 | 0.29 | 2.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Vinyl chloride | 0.87 | 0.64 | 2.0 | J | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Xylenes, Total | 56 | 0.74 | 3.0 | | µg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 90.3 | 0 | 70-130 | | %Rec | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 96.8 | 0 | 70-130 | | %Rec | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Surr: Dibromofluoromethane | 92.0 | 0 | 70-130 | | %Rec | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 2 | 3/18/2022 1:50:31 AM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.47 | 0.024 | 0.10 | | mg/L | 2 | 3/18/2022 1:50:31 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 2 | 3/18/2022 1:50:31 AM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|---------------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | DUP-3-9-22 |
| Project: | 2022 Quarterly Sampling 1st Qtr | Collection Date: | 3/9/2022 |
| Lab ID: | 2203574-007B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | 0.074 | 0.034 | 0.093 | JD | µg/L | 10 | 3/17/2022 2:28:53 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022

Lab ID: 2203574-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 21 | 0.32 | 1.3 | | mg/L | 20 | 3/15/2022 2:16:31 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 1.0 | 1.6 | D | mg/L | 20 | 3/15/2022 2:16:31 PM | 66129 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 20 | 3/15/2022 2:16:31 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 11 | 200 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 45 | 100 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Di-n-butyl phthalate | ND | 65 | 100 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Di-n-octyl phthalate | ND | 31 | 200 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 7.0 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Diethyl phthalate | ND | 39 | 100 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Dimethyl phthalate | ND | 20 | 100 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 2,4-Dimethylphenol | ND | 9.7 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 2,4-Dinitrophenol | ND | 5.0 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 2-Methylphenol | ND | 5.1 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 3+4-Methylphenol | ND | 4.5 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Phenol | ND | 3.3 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Pyridine | ND | 100 | 100 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 4.3 | 50 | D | µg/L | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 3/16/2022 7:57:19 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.95 | 20 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Naphthalene | 2.0 | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Acenaphthene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Fluorene | ND | 0.61 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Phenanthrene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Anthracene | ND | 0.67 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Fluoranthene | ND | 2.0 | 4.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Pyrene | ND | 3.2 | 4.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.73 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Chrysene | ND | 0.48 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 1.1 | 2.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.87 | 6.0 | D | µg/L | 20 | 3/17/2022 9:11:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022

Lab ID: 2203574-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 20 | 3/17/2022 9:11:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 20 | 3/17/2022 9:11:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022

Lab ID: 2203574-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.00021 | 0.00017 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Vanadium | 0.062 | 0.0029 | 0.0050 | | mg/L | 5 | 3/21/2022 2:24:56 PM | 66151 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Arsenic | 0.0026 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Barium | 0.059 | 0.0023 | 0.0050 | | mg/L | 5 | 3/15/2022 7:59:36 PM | 66151 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Lead | 0.00019 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Selenium | 0.00097 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 3:54:58 PM | 66151 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000095 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 3:53:10 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022

Lab ID: 2203574-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:51:10 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:51:10 PM | C86413 |
| Vanadium | 0.056 | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:51:10 PM | C86413 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 3/11/2022 12:51:10 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Arsenic | 0.0021 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Barium | 0.053 | 0.0023 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Beryllium | ND | 0.0010 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Cadmium | ND | 0.00033 | 0.0025 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Chromium | ND | 0.00069 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Nickel | ND | 0.0024 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 5:00:23 PM | A86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 3:55:18 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,2-Dichloroethane (EDC) | 0.41 | 0.25 | 1.0 | J | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Chloromethane | 0.66 | 0.41 | 3.0 | J | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 89.0 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Surr: Dibromofluoromethane | 95.1 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 2:18:55 AM | R86565 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.039 | 0.012 | 0.050 | J | mg/L | 1 | 3/18/2022 2:18:55 AM | R86565 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 2:18:55 AM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.035 | 0.095 | D | µg/L | 10 | 3/17/2022 3:44:29 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 3/15/2022 2:40:22 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 2:40:22 PM | 66129 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 2:40:22 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: 2-Fluorophenol | 39.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: Phenol-d5 | 29.5 | 0 | 28.5-64.7 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: 2,4,6-Tribromophenol | 59.8 | 0 | 18.6-129 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: Nitrobenzene-d5 | 49.8 | 0 | 36.9-103 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: 2-Fluorobiphenyl | 46.5 | 0 | 38.1-99.9 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| Surr: 4-Terphenyl-d14 | 86.8 | 0 | 48-155 | | %Rec | 1 | 3/16/2022 8:39:44 PM | 66111 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 9:56:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.5 | 0 | 31.6-100 | | %Rec | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Surr: 2-Fluorobiphenyl | 34.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/17/2022 9:56:00 PM | 66214 |
| Surr: 4-Terphenyl-d14 | 95.5 | 0 | 72.3-147 | | %Rec | 1 | 3/17/2022 9:56:00 PM | 66214 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Vanadium | ND | 0.00058 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Barium | ND | 0.00046 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/17/2022 4:07:13 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/18/2022 4:01:42 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 8:30:00 AM

Lab ID: 2203574-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/11/2022 12:54:28 PM | C86413 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/11/2022 12:54:28 PM | C86413 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/11/2022 12:54:28 PM | C86413 |
| Zinc | 0.0045 | 0.0032 | 0.010 | J | mg/L | 1 | 3/11/2022 12:54:28 PM | C86413 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 5:03:05 PM | A86624 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Barium | ND | 0.00046 | 0.0010 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Chromium | 0.00020 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/16/2022 1:25:13 PM | A86537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000095 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/18/2022 4:08:07 PM | 66260 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-9-22

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date: 3/9/2022 10:40:00 AM

Lab ID: 2203574-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Acetone | 3.1 | 2.5 | 10 | J | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Chloromethane | 0.68 | 0.41 | 3.0 | J | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Methylene Chloride | 4.0 | 0.50 | 3.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 90.6 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Surr: Dibromofluoromethane | 96.0 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:30:51 PM | R86565 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:30:51 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date:

Lab ID: 2203574-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Methylene Chloride | 0.51 | 0.50 | 3.0 | J | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Surr: 1,2-Dichloroethane-d4 | 89.4 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Surr: 4-Bromofluorobenzene | 99.1 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Surr: Dibromofluoromethane | 91.6 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:59:27 PM | R86565 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 3/17/2022 10:59:27 PM | R86565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203574

Date Reported: 3/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 Quarterly Sampling 1st Qtr

Collection Date:

Lab ID: 2203574-010B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.035 | 0.095 | D | µg/L | 10 | 3/17/2022 4:14:43 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

March 18, 2022

Hall Environmental Analysis Laboratory

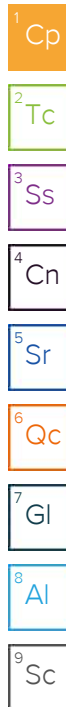
Sample Delivery Group: L1470301

Samples Received: 03/11/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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2203574-001F MKTF-42 L1470301-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:09 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203574-002F MKTF-41 L1470301-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:10 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-003F MKTF-32 L1470301-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:11 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-004F MKTF-34 L1470301-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:13 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-005F PW-3 L1470301-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:14 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-006F PW-4 L1470301-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:15 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-007F DUP-3-9-22 L1470301-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:18 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203574-008F EB-3-9-22 L1470301-08 WW

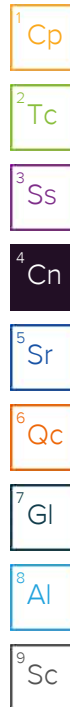
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1832548 | 1 | 03/16/22 07:21 | 03/17/22 13:21 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 6.93 | | 1.80 | 5.00 | 1 | 03/17/2022 13:09 | WG1832548 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 4.04 | J | 1.80 | 5.00 | 1 | 03/17/2022 13:10 | WG1832548 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 2.03 | J | 1.80 | 5.00 | 1 | 03/17/2022 13:11 | WG1832548 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/17/2022 13:13 | WG1832548 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/09/22 10:40

L1470301

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/17/2022 13:14 | WG1832548 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/17/2022 13:15 | WG1832548 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 3.89 | J | 1.80 | 5.00 | 1 | 03/17/2022 13:18 | WG1832548 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 03/17/2022 13:21 | WG1832548 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3770945-1 03/17/22 12:57

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1470301-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1470301-03 03/17/22 13:11 • (DUP) R3770945-5 03/17/22 13:12

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 2.03 | 2.16 | 1 | 6.21 | J | 20 |

L1470308-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1470308-02 03/17/22 13:23 • (DUP) R3770945-8 03/17/22 13:24

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3770945-2 03/17/22 12:58

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 104 | 104 | 87.1-120 | |

L1470265-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1470265-02 03/17/22 13:03 • (MS) R3770945-3 03/17/22 13:04 • (MSD) R3770945-4 03/17/22 13:05

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 61.3 | 60.9 | 61.3 | 60.9 | 1 | 90.0-110 | J6 | J6 | 0.655 | 20 |

L1470301-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1470301-06 03/17/22 13:15 • (MS) R3770945-6 03/17/22 13:16 • (MSD) R3770945-7 03/17/22 13:17

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 99.8 | 96.7 | 99.8 | 96.7 | 1 | 90.0-110 | | | 3.16 | 20 |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

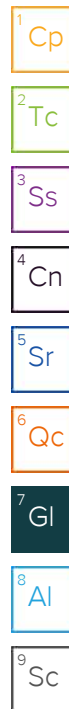
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |



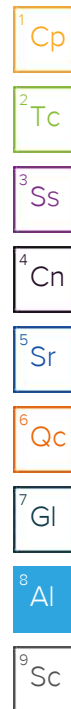
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

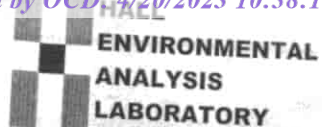
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1

OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

F233

| | | | | | | | |
|------------------|----------------------|---------|---------|-----------|----------------|------|----------------|
| SUB CONTRACTOR | Pace TN | COMPANY | PACE TN | PHONE: | (800) 767-5859 | FAX: | (615) 758-5859 |
| ADDRESS | 12065 Lebanon Rd | | | ACCOUNT # | | | |
| CITY, STATE, ZIP | Mt. Juliet, TN 37122 | | | EMAIL | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|---------------------|
| 1 | 2203574-001F | MKTF-42 | 500AMBHDP | Groundw | 3/9/2022 9:00:00 AM | 1 | Cyanide -01 |
| 2 | 2203574-002F | MKTF-41 | 500AMBHDP | Groundw | 3/9/2022 9:35:00 AM | 1 | Cyanide -02 |
| 3 | 2203574-003F | MKTF-32 | 500AMBHDP | Groundw | 3/9/2022 10:00:00 AM | 1 | Cyanide -03 |
| 4 | 2203574-004F | MKTF-34 | 500AMBHDP | Groundw | 3/9/2022 10:20:00 AM | 1 | Cyanide -04 |
| 5 | 2203574-005F | PW-3 | 500AMBHDP | Groundw | 3/9/2022 10:40:00 AM | 1 | Cyanide -05 |
| 6 | 2203574-006F | PW-4 | 500AMBHDP | Groundw | 3/9/2022 8:35:00 AM | 1 | Cyanide -06 |
| 7 | 2203574-007F | DUP-3-9-22 | 500AMBHDP | Groundw | 3/9/2022 | 1 | Cyanide -07 |
| 8 | 2203574-008F | EB-3-9-22 | 500AMBHDP | Groundw | 3/9/2022 8:30:00 AM | 1 | Cyanide -08 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|-----------------|---------------|---------------------------------|---------------|-----------|---|
| Relinquished By: <i>CNC</i> | Date: 3/10/2022 | Time: 8:58 AM | Received By: <i>[Signature]</i> | Date: 3/11/22 | Time: 900 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples: _____ °C Attempt to Cool? ☐ |
| Comments: | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C86413 | RunNo: 86413 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3048353 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C86413 | RunNo: 86413 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3048354 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C86413 | RunNo: 86413 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3048355 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203574-008EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-3-9-22 | Batch ID: C86413 | RunNo: 86413 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3048505 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.004484 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203574-008EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-3-9-22 | Batch ID: C86413 | RunNo: 86413 | | | | | | | | |
| Prep Date: | Analysis Date: 3/11/2022 | SeqNo: 3048506 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|-------|----------|------|
| Sample ID: 2203574-008EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-3-9-22 | | Batch ID: C86413 | | RunNo: 86413 | | | | | | |
| Prep Date: | | Analysis Date: 3/11/2022 | | SeqNo: 3048506 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | 0.982 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.7 | 70 | 130 | 0.908 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | 2.10 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.004484 | 99.0 | 70 | 130 | 2.67 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66151 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052849 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |
| Silver | ND | 0.00050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66151 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052850 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|---------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 97.6 | 50 | 150 | | | J |
| Barium | 0.00085 | 0.0010 | 0.001000 | 0 | 85.5 | 50 | 150 | | | J |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.5 | 50 | 150 | | | J |
| Nickel | 0.00098 | 0.0010 | 0.001000 | 0 | 98.3 | 50 | 150 | | | J |
| Selenium | 0.00087 | 0.0010 | 0.001000 | 0 | 86.7 | 50 | 150 | | | J |
| Silver | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.2 | 50 | 150 | | | J |
| Zinc | 0.0099 | 0.010 | 0.01000 | 0 | 99.3 | 50 | 150 | | | J |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66151 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66151 | RunNo: 86510 |
| Prep Date: 3/14/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052851 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-66151 | | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 66151 | | | RunNo: 86510 | | | | | |
| Prep Date: 3/14/2022 | | Analysis Date: 3/15/2022 | | | SeqNo: 3052851 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.26 | 0.010 | 0.2500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|--------|---------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: A86537 | | | RunNo: 86537 | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | | SeqNo: 3053956 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A86537 | | RunNo: 86537 | | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | SeqNo: 3053957 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.2 | 50 | 150 | | | J |
| Barium | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Beryllium | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Cadmium | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.9 | 50 | 150 | | | J |
| Chromium | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.2 | 50 | 150 | | | J |
| Nickel | 0.00095 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Selenium | 0.00069 | 0.0010 | 0.001000 | 0 | 69.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A86537 | | RunNo: 86537 | | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | SeqNo: 3053958 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 96.4 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A86537 | | RunNo: 86537 | | | | | | | |
| Prep Date: | Analysis Date: 3/16/2022 | | SeqNo: 3053958 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 97.6 | 85 | 115 | | | |
| Beryllium | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |
| Chromium | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.4 | 85 | 115 | | | |
| Nickel | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 95.0 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66191 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055017 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |
| Silver | ND | 0.00050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLLCS-66191 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055018 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Barium | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Cadmium | 0.00047 | 0.00050 | 0.0005000 | 0 | 94.2 | 50 | 150 | | | J |
| Chromium | 0.0012 | 0.0010 | 0.001000 | 0 | 124 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Nickel | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Silver | 0.00053 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Zinc | 0.0097 | 0.010 | 0.01000 | 0 | 97.4 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-66191 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055019 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 85 | 115 | | | |
| Beryllium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 85 | 115 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 99.6 | 85 | 115 | | | |
| Chromium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.25 | 0.010 | 0.2500 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLLCS-66191 | SampType: LCSSL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055052 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00078 | 0.0010 | 0.001000 | 0 | 78.5 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: A86537 | | RunNo: 86537 | | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | SeqNo: 3055193 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|----|---------|--|--|--|--|--|--|--|--|
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A86537 | | RunNo: 86537 | | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | SeqNo: 3055194 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|---------|---------|-----------|---|------|----|-----|--|--|---|
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.2 | 50 | 150 | | | J |
| Barium | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Beryllium | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Cadmium | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.9 | 50 | 150 | | | J |
| Chromium | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.2 | 50 | 150 | | | J |
| Nickel | 0.00095 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Selenium | 0.00069 | 0.0010 | 0.001000 | 0 | 69.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A86537 | | RunNo: 86537 | | | | | | |
| Prep Date: | | Analysis Date: 3/16/2022 | | SeqNo: 3055195 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|-------|---------|---------|---|------|----|-----|--|--|--|
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 96.4 | 85 | 115 | | | |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 97.6 | 85 | 115 | | | |
| Beryllium | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |
| Chromium | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.4 | 85 | 115 | | | |
| Nickel | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 95.0 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056942 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|----|---------|--|--|--|--|--|--|--|--|
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056943 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|---------|---------|-----------|---|-----|----|-----|--|--|--|
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Barium | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 109 | 50 | 150 | | | |
| Nickel | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056944 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|-------|---------|---------|---|-----|----|-----|--|--|--|
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 113 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058028 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058029 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 115 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Barium | 0.00091 | 0.0010 | 0.001000 | 0 | 91.1 | 50 | 150 | | | J |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.00051 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Chromium | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Nickel | 0.00098 | 0.0010 | 0.001000 | 0 | 98.4 | 50 | 150 | | | J |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.6 | 50 | 150 | | | J |

| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058030 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Beryllium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.8 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66259 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 66259 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055992 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-66259 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 66259 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055993 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00021 | 0.00020 | 0.0001500 | 0 | 143 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-66259 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 66259 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055994 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 107 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66260 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 66260 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055995 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00012 | 0.00020 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-66260 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 66260 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055996 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00021 | 0.00020 | 0.0001500 | 0 | 140 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-66260 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 66260 | RunNo: 86582 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/18/2022 | SeqNo: 3055999 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203574-002DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: MKTF-41 | | Batch ID: 66259 | | RunNo: 86582 | | | | | | |
| Prep Date: 3/18/2022 | | Analysis Date: 3/18/2022 | | SeqNo: 3056011 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0046 | 0.00020 | 0.005000 | 0.0001110 | 89.0 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|----------|-------------|-------|----------|------|
| Sample ID: 2203574-002DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: MKTF-41 | | Batch ID: 66259 | | RunNo: 86582 | | | | | | |
| Prep Date: 3/18/2022 | | Analysis Date: 3/18/2022 | | SeqNo: 3056012 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0046 | 0.00020 | 0.005000 | 0.0001110 | 89.9 | 75 | 125 | 0.951 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203574-008DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: EB-3-9-22 | | Batch ID: 66260 | | RunNo: 86582 | | | | | | |
| Prep Date: 3/18/2022 | | Analysis Date: 3/18/2022 | | SeqNo: 3056029 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 106 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203574-008DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: EB-3-9-22 | | Batch ID: 66260 | | RunNo: 86582 | | | | | | |
| Prep Date: 3/18/2022 | | Analysis Date: 3/18/2022 | | SeqNo: 3056030 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 105 | 75 | 125 | 0.758 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66232 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054885 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66232 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054886 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66232 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054887 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 0.1000 0 97.8 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-66232 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054888 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 0.1000 0 94.2 70 130 3.77 20 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66129 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052729 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.026 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.7 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66129 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052743 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 60.5 | 31.7 | 75.4 | 3.68 | 20 | |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.9 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66129 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052754 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 58.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.6 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055126 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.1 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 99.7 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 84.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 82.1 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 97.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203574-001ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-42 | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055128 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 26 | 1.0 | 20.00 | 9.532 | 82.5 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0.4338 | 97.4 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 1.124 | 80.3 | 70 | 130 | | | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 77.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2203574-001amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-42 | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055129 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 25 | 1.0 | 20.00 | 9.532 | 79.6 | 70 | 130 | 2.26 | 20 | |
| Toluene | 20 | 1.0 | 20.00 | 0.4338 | 96.7 | 70 | 130 | 0.745 | 20 | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | 0.264 | 20 | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 1.124 | 76.2 | 70 | 130 | 4.87 | 20 | |
| Trichloroethene (TCE) | 15 | 1.0 | 20.00 | 0 | 74.6 | 70 | 130 | 3.95 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.4 | | 10.00 | | 93.5 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.4 | | 10.00 | | 94.1 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 94.7 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86565 | | | RunNo: 86565 | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | | SeqNo: 3055141 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.65 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | 0.24 | 1.0 | | | | | | | | J |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.2 | | 10.00 | | 91.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: MB-66111 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66111 | RunNo: 86500 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053319 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 48.8 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 74 | | 200.0 | | 37.0 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 60.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 56 | | 100.0 | | 56.1 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 54.1 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 96 | | 100.0 | | 96.3 | 48 | 155 | | | |

| Sample ID: LCS-66111 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66111 | RunNo: 86500 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053320 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 51.7 | 15 | 87.6 | | | |
| Phenol | 75 | 5.0 | 200.0 | 0 | 37.7 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 95 | | 200.0 | | 47.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 73 | | 200.0 | | 36.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 67.3 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 59.1 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 57.2 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 85.5 | 48 | 155 | | | |

| Sample ID: LCSD-66111 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66111 | RunNo: 86500 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/16/2022 | SeqNo: 3053321 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: LCSD-66111 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66111 | | | RunNo: 86500 | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/16/2022 | | | SeqNo: 3053321 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 37 | 5.0 | 100.0 | 0 | 37.4 | 15 | 87.6 | 32.0 | 30.4 | R |
| Phenol | 51 | 5.0 | 200.0 | 0 | 25.4 | 16.8 | 70.5 | 38.9 | 37.2 | R |
| Surr: 2-Fluorophenol | 65 | | 200.0 | | 32.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 51 | | 200.0 | | 25.6 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.4 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 43 | | 100.0 | | 42.6 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 38 | | 100.0 | | 38.3 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 88.2 | 48 | 155 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| Sample ID: mb-66214 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: 66214 | | RunNo: 86562 | | | | | | |
| Prep Date: 3/16/2022 | | Analysis Date: 3/17/2022 | | SeqNo: 3054985 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 2.5 | | 4.000 | | 62.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 4.3 | | 8.000 | | 54.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 1.9 | | 4.000 | | 48.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 4.0 | | 4.000 | | 101 | 72.3 | 147 | | | |

| Sample ID: lcs-66214 | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | | Batch ID: 66214 | | RunNo: 86562 | | | | | | |
| Prep Date: 3/16/2022 | | Analysis Date: 3/17/2022 | | SeqNo: 3054986 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 0.10 | 2.000 | 0 | 34.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 62.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 65.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 69.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 92.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.2 | 0.10 | 2.000 | 0 | 111 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.10 | 2.000 | 0 | 101 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.6 | 0.30 | 2.000 | 0 | 128 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 3.8 | | 5.000 | | 76.0 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon

Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66214 | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 66214 | | RunNo: 86562 | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3054986 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 7.1 | | 10.00 | | 70.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 3.0 | | 5.000 | | 59.2 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 5.8 | | 5.000 | | 116 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: lcsd-66214 | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66214 | | RunNo: 86562 | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3054987 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 2.90 | 30.1 | |
| Naphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 21.3 | 79.9 | 0 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.6 | 80.1 | 1.90 | 25 | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 62.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 38.2 | 93.9 | 1.55 | 27.9 | |
| Anthracene | 1.4 | 0.10 | 2.000 | 0 | 69.0 | 41.1 | 95.6 | 0 | 25.6 | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 91.0 | 52.9 | 123 | 1.09 | 22.8 | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 85.0 | 51 | 113 | 2.38 | 20 | |
| Benz(a)anthracene | 2.1 | 0.10 | 2.000 | 0 | 103 | 51 | 147 | 7.48 | 24.1 | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 84.0 | 55.3 | 115 | 2.35 | 20 | |
| Benzo(b)fluoranthene | 2.0 | 0.10 | 2.000 | 0 | 100 | 44.4 | 136 | 0.995 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 126 | 31.4 | 165 | 1.57 | 21.1 | |
| Surr: Nitrobenzene-d5 | 3.4 | | 5.000 | | 68.4 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 6.4 | | 10.00 | | 63.6 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 2.6 | | 5.000 | | 52.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 5.7 | | 5.000 | | 113 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203574

24-Mar-22

Client: Marathon
Project: 2022 Quarterly Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055144 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.43 | 0.050 | 0.5000 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R86565 | | RunNo: 86565 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3055166 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.042 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203574**

RcptNo: 1

Received By: **Cheyenne Cason** 3/10/2022 8:00:00 AMCompleted By: **Cheyenne Cason** 3/10/2022 8:43:16 AMReviewed By: **TMC** 3/10/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
CME 3/10/22
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐
- # of preserved bottles checked for pH: 16 (<2 or >12 unless noted)
Adjusted? yes
Checked by: CME 3/10/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: added no. 4 mL HNO₃ to OOB for pH < 2 CME 3/10/22

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.8 | Good | Yes | | | |
| 2 | 3.5 | Good | Yes | | | |
| 3 | 0.9 | Good | Yes | | | |
| 4 | 0.9 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203667

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/11/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 14, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203667
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270 SIMS:

A laboratory error on the spiking of the LCS/LCSD occurred. The LCS/LCSD for only the 8270 SIMS compound was spiked with the inappropriate spike and we could not determine the LCS/LCSD concentrations for the samples in this batch. The surrogate recoveries were all acceptable for the 8270SIMS samples and all other method criteria were met. We have flagged all compounds with an "E" flag to represent the fact that the data for the 8270SIM test should be considered estimated.

"S" flagged denote that the surrogate recoveries are outside of the standard limits due to matrix interferences/sample dilution.

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 2-Butanone | 5.7 | 2.0 | 10 | J | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Chloromethane | 0.78 | 0.41 | 3.0 | J | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 89.5 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Surr: Dibromofluoromethane | 93.9 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 3:58:08 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.039 | 0.012 | 0.050 | J | mg/L | 1 | 3/18/2022 3:58:08 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 3:58:08 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.035 | 0.095 | D | µg/L | 10 | 3/17/2022 7:31:21 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.025 | 0.016 | 0.064 | J | mg/L | 1 | 3/15/2022 3:04:03 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 3:04:03 PM | 66129 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 3:04:03 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: 2-Fluorophenol | 46.7 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: Phenol-d5 | 33.8 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 61.5 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: Nitrobenzene-d5 | 60.2 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 57.7 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 99.8 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 2:52:57 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Naphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Acenaphthene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Fluorene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Phenanthrene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Anthracene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Pyrene | 0.24 | 0.16 | 0.20 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 1:45:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.7 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 59.2 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 1:45:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 109 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 1:45:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:03:54 AM | 66641 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:09:40 PM | 66191 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:09:40 PM | 66191 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 4:09:40 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 4:09:40 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 1:28:25 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| Zinc | 0.0070 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 9:43:59 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 11:51:53 AM | A86482 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/15/2022 11:51:53 AM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/15/2022 11:51:53 AM | A86482 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 11:51:53 AM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 1:30:31 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,2,4-Trimethylbenzene | 0.37 | 0.12 | 1.0 | J | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Chlorobenzene | 0.19 | 0.16 | 1.0 | J | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| sec-Butylbenzene | 0.21 | 0.14 | 1.0 | J | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Xylenes, Total | 0.77 | 0.37 | 1.5 | J | µg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 87.8 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Surr: Dibromofluoromethane | 91.3 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Surr: Toluene-d8 | 98.1 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 4:26:45 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.061 | 0.012 | 0.050 | | mg/L | 1 | 3/18/2022 4:26:45 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/18/2022 4:26:45 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Client Sample ID: MKTF-46
Project: 2022 GW Sampling 1st Qtr Collection Date: 3/10/2022 8:00:00 AM
Lab ID: 2203667-002B Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.093 | D | µg/L | 10 | 3/17/2022 8:01:42 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.042 | 0.016 | 0.064 | J | mg/L | 1 | 3/15/2022 3:27:46 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 3:27:46 PM | 66129 |
| Surr: DNOP | 99.6 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 3:27:46 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: 2-Fluorophenol | 49.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: Phenol-d5 | 37.9 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 55.8 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: Nitrobenzene-d5 | 59.2 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 60.4 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 96.4 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 3:34:20 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.7 | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Naphthalene | 0.18 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Acenaphthene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Fluorene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Phenanthrene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Anthracene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Pyrene | ND | 0.16 | 0.20 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 2:29:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.9 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 66.3 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 2:29:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 107 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 2:29:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.079 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Cobalt | 0.0041 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Vanadium | 0.0047 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:07:07 AM | 66641 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:12:06 PM | 66191 |
| Arsenic | 0.0012 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:12:06 PM | 66191 |
| Lead | 0.0011 | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 4:12:06 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 4:12:06 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 1:32:36 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 8:00:00 AM

Lab ID: 2203667-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.030 | 0.0011 | 0.0020 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Cobalt | 0.0029 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Vanadium | 0.0021 | 0.0017 | 0.050 | J | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| Zinc | 0.0099 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 9:45:36 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0015 | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:08:02 PM | A86482 |
| Arsenic | 0.00093 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/15/2022 12:08:02 PM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:30:36 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:08:02 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 1:34:41 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:00:00 AM

Lab ID: 2203667-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 8900 | 23 | 100 | | µg/L | 100 | 3/18/2022 5:52:58 PM | R86601 |
| Toluene | 3300 | 20 | 100 | | µg/L | 100 | 3/18/2022 5:52:58 PM | R86601 |
| Ethylbenzene | 1200 | 21 | 100 | | µg/L | 100 | 3/18/2022 5:52:58 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | 610 | 3.9 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,2,4-Trimethylbenzene | 470 | 1.2 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,3,5-Trimethylbenzene | 82 | 1.8 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Chloroform | 5.0 | 1.3 | 10 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,1-Dichloroethane | 7.2 | 2.7 | 10 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Isopropylbenzene | 36 | 1.8 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| n-Butylbenzene | 5.3 | 2.5 | 30 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| n-Propylbenzene | 93 | 1.8 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| sec-Butylbenzene | 1.6 | 1.4 | 10 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Styrene | 2.3 | 1.4 | 10 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Trichloroethene (TCE) | 3.0 | 2.0 | 10 | J | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Xylenes, Total | 2900 | 37 | 150 | | µg/L | 100 | 3/18/2022 5:52:58 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 88.5 | 0 | 70-130 | | %Rec | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 96.0 | 0 | 70-130 | | %Rec | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Surr: Dibromofluoromethane | 90.7 | 0 | 70-130 | | %Rec | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 10 | 3/18/2022 6:21:36 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 43 | 0.12 | 0.50 | | mg/L | 10 | 3/18/2022 6:21:36 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 10 | 3/18/2022 6:21:36 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203667-003B

Client Sample ID: MKTF-35

Collection Date: 3/10/2022 9:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.094 | D | µg/L | 10 | 3/17/2022 8:31:53 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:00:00 AM

Lab ID: 2203667-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.0 | 0.016 | 0.064 | | mg/L | 1 | 3/15/2022 3:51:29 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/15/2022 3:51:29 PM | 66129 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 3/15/2022 3:51:29 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 2,4-Dimethylphenol | 5.6 | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 2-Methylphenol | 5.5 | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 3+4-Methylphenol | 6.6 | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Phenol | 29 | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: Phenol-d5 | 35.1 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 78.9 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: Nitrobenzene-d5 | 56.7 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 59.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 94.6 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 4:16:03 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.7 | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Naphthalene | 96 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| 1-Methylnaphthalene | 9.1 | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| 2-Methylnaphthalene | 13 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Acenaphthene | 1.6 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Fluorene | 0.54 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Phenanthrene | 0.16 | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Anthracene | 0.30 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Pyrene | 0.16 | 0.16 | 0.20 | JE | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 3:14:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:00:00 AM

Lab ID: 2203667-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.3 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 56.0 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 3:14:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 88.7 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 3:14:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:00:00 AM

Lab ID: 2203667-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|---------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.2 | 0.016 | 0.030 | * | mg/L | 10 | 4/6/2022 11:55:57 AM | 66641 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Chromium | 0.017 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Cobalt | 0.016 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Nickel | 0.018 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Vanadium | 0.058 | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| Zinc | 0.039 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:10:12 AM | 66641 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/17/2022 4:14:33 PM | 66191 |
| Arsenic | 0.0072 | 0.00063 | 0.0050 | | mg/L | 5 | 3/17/2022 4:14:33 PM | 66191 |
| Lead | 0.022 | 0.00031 | 0.0025 | * | mg/L | 5 | 3/17/2022 4:14:33 PM | 66191 |
| Selenium | 0.0045 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/17/2022 4:14:33 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 3/21/2022 5:10:13 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:00:00 AM

Lab ID: 2203667-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 3.6 | 0.0056 | 0.010 | * | mg/L | 5 | 3/14/2022 9:50:17 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| Zinc | 0.0057 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 9:48:55 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00071 | 0.00044 | 0.0010 | J | mg/L | 1 | 3/15/2022 12:10:43 PM | A86482 |
| Arsenic | 0.00058 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/15/2022 12:10:43 PM | A86482 |
| Lead | 0.00021 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/16/2022 1:44:05 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:10:43 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 2:49:28 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 14000 | 110 | 500 | | µg/L | 500 | 3/18/2022 7:47:05 PM | R86601 |
| Toluene | 53 | 10 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Ethylbenzene | 490 | 11 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | 34 | 20 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,2,4-Trimethylbenzene | 6.5 | 6.1 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,2-Dichloroethane (EDC) | 21 | 13 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Chloroform | 9.5 | 6.7 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Chloromethane | 47 | 21 | 150 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Isopropylbenzene | 11 | 9.1 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| n-Propylbenzene | 31 | 9.1 | 50 | J | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Xylenes, Total | 130 | 19 | 75 | | µg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 93.3 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Surr: Dibromofluoromethane | 93.6 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 8:15:36 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 27 | 0.61 | 2.5 | | mg/L | 50 | 3/18/2022 8:15:36 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 8:15:36 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.034 | 0.094 | D | µg/L | 10 | 3/17/2022 9:02:03 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 5.4 | 0.16 | 0.64 | | mg/L | 10 | 3/15/2022 4:15:07 PM | 66129 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/15/2022 4:15:07 PM | 66129 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/15/2022 4:15:07 PM | 66129 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Phenol | 71 | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: 2-Fluorophenol | 45.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: Phenol-d5 | 36.7 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 80.6 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: Nitrobenzene-d5 | 61.9 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 56.7 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 4:57:42 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Naphthalene | 170 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| 1-Methylnaphthalene | 82 | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| 2-Methylnaphthalene | 59 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Acenaphthene | 2.4 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Fluorene | 4.1 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Phenanthrene | 5.5 | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Anthracene | 0.20 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Pyrene | 0.16 | 0.16 | 0.20 | JE | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 3:58:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.0 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 48.0 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 3:58:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 73.3 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 3:58:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 3.4 | 0.0082 | 0.015 | * | mg/L | 5 | 4/7/2022 11:32:35 AM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Nickel | 0.055 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Vanadium | 0.0036 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:19:16 AM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:16:59 PM | 66191 |
| Arsenic | 0.0031 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:16:59 PM | 66191 |
| Lead | 0.00049 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 4:16:59 PM | 66191 |
| Selenium | 0.00059 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/17/2022 4:16:59 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 2:51:36 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 3.3 | 0.0056 | 0.010 | * | mg/L | 5 | 3/14/2022 9:58:06 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Nickel | 0.057 | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Vanadium | 0.0023 | 0.0017 | 0.050 | J | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 9:56:40 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:13:25 PM | A86482 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 3/15/2022 12:13:25 PM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:46:46 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:13:25 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 2:53:44 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 26000 | 110 | 500 | | µg/L | 500 | 3/18/2022 8:44:12 PM | R86601 |
| Toluene | 61 | 10 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Ethylbenzene | 1200 | 11 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | 1000 | 20 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,2,4-Trimethylbenzene | 12 | 6.1 | 50 | J | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,2-Dichloroethane (EDC) | 21 | 13 | 50 | J | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Chloroform | 9.2 | 6.7 | 50 | J | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Chloromethane | 47 | 21 | 150 | J | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Isopropylbenzene | 35 | 9.1 | 50 | J | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| n-Propylbenzene | 110 | 9.1 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Xylenes, Total | 160 | 19 | 75 | | µg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 87.3 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Surr: Dibromofluoromethane | 88.4 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 9:12:42 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 58 | 0.61 | 2.5 | | mg/L | 50 | 3/18/2022 9:12:42 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 9:12:42 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|-------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.035 | 0.095 | D | µg/L | 10 | 3/17/2022 9:32:12 PM | 66232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 6.5 | 0.16 | 0.64 | | mg/L | 10 | 3/21/2022 3:04:56 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/21/2022 3:04:56 PM | 66219 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/21/2022 3:04:56 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Phenol | 61 | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: Phenol-d5 | 39.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 69.3 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: Nitrobenzene-d5 | 64.2 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 56.6 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 5:39:24 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.3 | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Naphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| 1-Methylnaphthalene | 74 | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| 2-Methylnaphthalene | 83 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Acenaphthene | 2.2 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Fluorene | 3.0 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Phenanthrene | 2.6 | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Anthracene | 0.30 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Fluoranthene | 0.18 | 0.10 | 0.20 | JE | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Pyrene | 0.18 | 0.16 | 0.20 | JE | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 4:42:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 73.4 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 47.5 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 4:42:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 77.6 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 4:42:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.2 | 0.016 | 0.030 | * | mg/L | 10 | 4/7/2022 11:43:51 AM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Nickel | 0.051 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Vanadium | 0.0049 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:27:47 AM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:19:26 PM | 66191 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:19:26 PM | 66191 |
| Lead | 0.00049 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 4:19:26 PM | 66191 |
| Selenium | 0.00045 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/17/2022 4:19:26 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 2:55:53 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:00:00 AM

Lab ID: 2203667-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 5.1 | 0.011 | 0.020 | * | mg/L | 10 | 4/19/2022 12:00:47 PM | A87332 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Nickel | 0.051 | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| Zinc | 0.0091 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 9:59:32 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:16:06 PM | A86482 |
| Arsenic | 0.0032 | 0.00012 | 0.0010 | | mg/L | 1 | 3/15/2022 12:16:06 PM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:49:28 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:16:06 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 2:58:02 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 6300 | 45 | 200 | | µg/L | 200 | 3/18/2022 9:41:17 PM | R86601 |
| Toluene | 140 | 4.0 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Ethylbenzene | 570 | 4.3 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | 2300 | 7.9 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,2,4-Trimethylbenzene | 290 | 2.4 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,3,5-Trimethylbenzene | 56 | 3.6 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,2-Dichloroethane (EDC) | 8.9 | 5.1 | 20 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Acetone | ND | 50 | 200 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Bromomethane | ND | 17 | 60 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 2-Butanone | ND | 41 | 200 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Carbon disulfide | ND | 12 | 200 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Chlorobenzene | ND | 3.1 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Chloroform | ND | 2.7 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Chloromethane | 24 | 8.2 | 60 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| cis-1,2-DCE | ND | 7.8 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,1-Dichloroethane | 11 | 5.5 | 20 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,1-Dichloroethene | ND | 4.0 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Isopropylbenzene | 36 | 3.7 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 4-Isopropyltoluene | 4.7 | 4.0 | 20 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Methylene Chloride | ND | 10 | 60 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| n-Butylbenzene | 11 | 5.1 | 60 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| n-Propylbenzene | 87 | 3.6 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| sec-Butylbenzene | 3.3 | 2.9 | 20 | J | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Styrene | ND | 2.7 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 7.1 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 6.0 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Trichloroethene (TCE) | ND | 4.1 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Vinyl chloride | ND | 6.4 | 20 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Xylenes, Total | 670 | 7.4 | 30 | | µg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 93.2 | 0 | 70-130 | | %Rec | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 95.4 | 0 | 70-130 | | %Rec | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Surr: Dibromofluoromethane | 91.0 | 0 | 70-130 | | %Rec | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 20 | 3/18/2022 10:09:49 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 24 | 0.24 | 1.0 | | mg/L | 20 | 3/18/2022 10:09:49 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 97.8 | 0 | 70-130 | | %Rec | 20 | 3/18/2022 10:09:49 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203667-006B

Client Sample ID: OW-58A

Collection Date: 3/10/2022 10:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/15/2022 10:24:26 PM | 66149 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 4.2 | 0.16 | 0.64 | | mg/L | 10 | 3/21/2022 3:28:43 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/21/2022 3:28:43 PM | 66219 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/21/2022 3:28:43 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 2,4-Dimethylphenol | 8.9 | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 2-Methylphenol | 8.9 | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 3+4-Methylphenol | 4.6 | 0.45 | 5.0 | J | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Phenol | 17 | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: 2-Fluorophenol | 44.0 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: Phenol-d5 | 35.5 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 84.8 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: Nitrobenzene-d5 | 60.0 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 93.7 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 6:20:55 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.9 | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Naphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| 1-Methylnaphthalene | 91 | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| 2-Methylnaphthalene | 89 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Acenaphthene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Fluorene | 4.7 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Phenanthrene | 4.6 | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Anthracene | 0.42 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Fluoranthene | 0.26 | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Pyrene | 0.28 | 0.16 | 0.20 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/17/2022 5:26:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.2 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 50.7 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 5:26:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 77.9 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 5:26:00 AM | R86533 |

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Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.90 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Cobalt | 0.0027 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Nickel | 0.034 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:39:41 AM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:21:52 PM | 66191 |
| Arsenic | 0.0043 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:21:52 PM | 66191 |
| Lead | 0.0014 | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 4:21:52 PM | 66191 |
| Selenium | 0.00044 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/17/2022 4:21:52 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 3:00:12 PM | 66283 |

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Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.94 | 0.0011 | 0.0020 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Nickel | 0.037 | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| Zinc | 0.015 | 0.0032 | 0.010 | | mg/L | 1 | 3/14/2022 10:02:20 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:18:47 PM | A86482 |
| Arsenic | 0.0037 | 0.00012 | 0.0010 | | mg/L | 1 | 3/15/2022 12:18:47 PM | A86482 |
| Lead | 0.00077 | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:52:09 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:18:47 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 3:02:20 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 8400 | 110 | 500 | | µg/L | 500 | 3/18/2022 10:38:20 PM | R86601 |
| Toluene | 53 | 10 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Ethylbenzene | 1300 | 11 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Methyl tert-butyl ether (MTBE) | 21 | 20 | 50 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,2-Dichloroethane (EDC) | 21 | 13 | 50 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Chloroform | 17 | 6.7 | 50 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Chloromethane | 60 | 21 | 150 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,1-Dichloroethane | 31 | 14 | 50 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Isopropylbenzene | 64 | 9.1 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| n-Butylbenzene | 20 | 13 | 150 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| n-Propylbenzene | 180 | 9.1 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| sec-Butylbenzene | 9.4 | 7.2 | 50 | J | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Xylenes, Total | 150 | 19 | 75 | | µg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 93.7 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Surr: Dibromofluoromethane | 93.0 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 11:06:47 PM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 28 | 0.61 | 2.5 | | mg/L | 50 | 3/18/2022 11:06:47 PM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 50 | 3/18/2022 11:06:47 PM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/15/2022 10:39:32 PM | 66149 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.3 | 0.016 | 0.064 | | mg/L | 1 | 3/18/2022 8:26:36 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 8:26:36 PM | 66219 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 8:26:36 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 2,4-Dimethylphenol | 5.4 | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Phenol | 24 | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: 2-Fluorophenol | 44.4 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: Phenol-d5 | 35.9 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 80.0 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: Nitrobenzene-d5 | 58.6 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 58.8 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 84.3 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 7:02:29 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Naphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| 1-Methylnaphthalene | 65 | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| 2-Methylnaphthalene | 94 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Acenaphthene | 0.76 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Fluorene | 1.4 | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Phenanthrene | 1.0 | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Anthracene | 0.20 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Pyrene | 0.24 | 0.16 | 0.20 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 6:10:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-63**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/10/2022 9:30:00 AM**Lab ID:** 2203667-007C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.2 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 60.9 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 6:10:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 86.9 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 6:10:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 4.3 | 0.0082 | 0.015 | * | mg/L | 5 | 4/6/2022 11:43:22 AM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Nickel | 0.025 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Vanadium | 0.0026 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:42:07 AM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:24:19 PM | 66191 |
| Arsenic | 0.0082 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:24:19 PM | 66191 |
| Lead | 0.000081 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/17/2022 4:24:19 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 4:24:19 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 3:04:28 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 9:30:00 AM

Lab ID: 2203667-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 4.6 | 0.0056 | 0.010 | * | mg/L | 5 | 3/14/2022 10:06:37 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Nickel | 0.027 | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Vanadium | 0.0027 | 0.0017 | 0.050 | J | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| Zinc | 0.015 | 0.0032 | 0.010 | | mg/L | 1 | 3/14/2022 10:05:11 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:21:29 PM | A86482 |
| Arsenic | 0.0075 | 0.00012 | 0.0010 | | mg/L | 1 | 3/15/2022 12:21:29 PM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 1:57:32 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:21:29 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 3:06:36 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.39 | 0.23 | 1.0 | J | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,2,4-Trimethylbenzene | 1.1 | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,3,5-Trimethylbenzene | 0.21 | 0.18 | 1.0 | J | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Chlorobenzene | 0.38 | 0.16 | 1.0 | J | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| sec-Butylbenzene | 0.37 | 0.14 | 1.0 | J | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Xylenes, Total | 1.8 | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 88.5 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 95.9 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Surr: Dibromofluoromethane | 93.9 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 12:51:52 PM | R86626 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 12:51:52 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.066 | 0.012 | 0.050 | | mg/L | 1 | 3/21/2022 12:51:52 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 12:51:52 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|--|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E Estimated value |
| H | Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/15/2022 10:54:41 PM | 66149 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.046 | 0.016 | 0.064 | J | mg/L | 1 | 3/18/2022 8:50:11 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 8:50:11 PM | 66219 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 8:50:11 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: 2-Fluorophenol | 42.3 | 0 | 29.4-87.7 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: Phenol-d5 | 33.8 | 0 | 28.5-64.7 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: 2,4,6-Tribromophenol | 55.3 | 0 | 18.6-129 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: Nitrobenzene-d5 | 55.3 | 0 | 36.9-103 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: 2-Fluorobiphenyl | 53.7 | 0 | 38.1-99.9 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| Surr: 4-Terphenyl-d14 | 86.1 | 0 | 48-155 | | %Rec | 1 | 3/17/2022 7:43:46 PM | 66142 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.5 | 0.048 | 1.0 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Naphthalene | 0.34 | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Acenaphthene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Fluorene | ND | 0.031 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Phenanthrene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Anthracene | ND | 0.034 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Fluoranthene | ND | 0.10 | 0.20 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Pyrene | ND | 0.16 | 0.20 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Chrysene | ND | 0.024 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | E | µg/L | 1 | 3/17/2022 6:55:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.4 | 0 | 31.6-100 | E | %Rec | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Surr: 2-Fluorobiphenyl | 58.6 | 0 | 26.7-90.1 | E | %Rec | 1 | 3/17/2022 6:55:00 AM | R86533 |
| Surr: 4-Terphenyl-d14 | 95.1 | 0 | 72.3-147 | E | %Rec | 1 | 3/17/2022 6:55:00 AM | R86533 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.069 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Cobalt | 0.0032 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Vanadium | 0.0049 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 11:44:49 AM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/17/2022 4:26:45 PM | 66191 |
| Arsenic | 0.0012 | 0.00013 | 0.0010 | | mg/L | 1 | 3/17/2022 4:26:45 PM | 66191 |
| Lead | 0.0010 | 0.000061 | 0.00050 | | mg/L | 1 | 3/17/2022 4:26:45 PM | 66191 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/17/2022 4:26:45 PM | 66191 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 3/21/2022 5:12:22 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022

Lab ID: 2203667-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.032 | 0.0011 | 0.0020 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| Zinc | 0.0081 | 0.0032 | 0.010 | J | mg/L | 1 | 3/14/2022 10:08:01 AM | A86443 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/15/2022 12:24:10 PM | A86482 |
| Arsenic | 0.00096 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/15/2022 12:24:10 PM | A86482 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/16/2022 2:02:55 PM | A86537 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/15/2022 12:24:10 PM | A86482 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:16:32 PM | 66283 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-10-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/10/2022 10:30:00 AM

Lab ID: 2203667-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.37 | 0.23 | 1.0 | J | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Acetone | 4.5 | 2.5 | 10 | J | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 88.1 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 99.8 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Surr: Dibromofluoromethane | 92.6 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:03:52 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.040 | 0.012 | 0.050 | J | mg/L | 1 | 3/19/2022 12:03:52 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:03:52 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203667-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.29 | 0.23 | 1.0 | J | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Chloromethane | 0.69 | 0.41 | 3.0 | J | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 88.6 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 98.4 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Surr: Dibromofluoromethane | 89.7 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Surr: Toluene-d8 | 97.3 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:32:22 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.034 | 0.012 | 0.050 | J | mg/L | 1 | 3/19/2022 12:32:22 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 99.1 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 12:32:22 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203667

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203667-011B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/15/2022 11:09:46 PM | 66149 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

March 23, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1471288

Samples Received: 03/15/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Cp: Cover Page | 1 |
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| Sr: Sample Results | 5 |
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| 2203667-002F MKTF-46 L1471288-02 | 6 |
| 2203667-003F MKTF-35 L1471288-03 | 7 |
| 2203667-004F OW-57 L1471288-04 | 8 |
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2203667-001F EB 3-10-22 L1471288-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:45 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203667-002F MKTF-46 L1471288-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:51 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-003F MKTF-35 L1471288-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:52 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-004F OW-57 L1471288-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:54 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-005F OW-58 L1471288-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:55 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-006F OW-58A L1471288-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:56 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-007F OW-63 L1471288-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 13:57 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203667-008F DUP 3-10-22 L1471288-08 WW

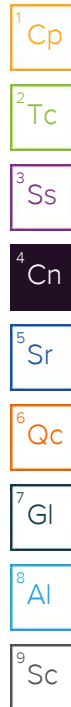
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1834196 | 1 | 03/17/22 19:19 | 03/22/22 14:00 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 13:45 | WG1834196 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 13:51 | WG1834196 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 03/10/22 09:00

L1471288

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 13:52 | WG1834196 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 03/10/22 09:30

L1471288

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis
date / time | Batch |
|---------|--------|-----------|---------|----------|-------------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 13:54 | WG1834196 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/10/22 10:00

L1471288

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00515 | | 0.00500 | 1 | 03/22/2022 13:55 | WG1834196 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 03/10/22 10:30

L1471288

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00527 | | 0.00500 | 1 | 03/22/2022 13:56 | WG1834196 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|-----------|
| Cyanide | 0.00773 | J3 J6 | 0.00500 | 1 | 03/22/2022 13:57 | WG1834196 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 03/10/22 00:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 14:00 | WG1834196 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1471288-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3772642-1 03/22/22 13:26

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1471012-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1471012-02 03/22/22 13:35 • (DUP) R3772642-3 03/22/22 13:38

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1471288-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1471288-03 03/22/22 13:52 • (DUP) R3772642-6 03/22/22 13:53

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3772642-2 03/22/22 13:27

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0997 | 99.7 | 87.1-120 | |

L1471288-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471288-01 03/22/22 13:45 • (MS) R3772642-4 03/22/22 13:46 • (MSD) R3772642-5 03/22/22 13:48

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0937 | 0.102 | 93.7 | 102 | 1 | 90.0-110 | | | 8.48 | 20 |

L1471288-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1471288-07 03/22/22 13:57 • (MS) R3772642-7 03/22/22 13:58 • (MSD) R3772642-8 03/22/22 13:59

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00773 | 0.0819 | 0.109 | 74.2 | 101 | 1 | 90.0-110 | J6 | J3 | 28.4 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

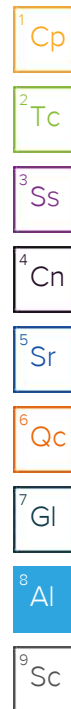
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

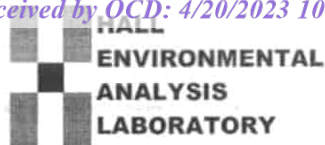
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 1294 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

B157

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|---------------------|
| 1 | 2203667-001F | EB 3-10-22 | 500AMBHDP | Groundw | 3/10/2022 8:00:00 AM | 1 | Total Cyanide -01 |
| 2 | 2203667-002F | MKTF-46 | 500AMBHDP | Groundw | 3/10/2022 8:00:00 AM | 1 | Total Cyanide -02 |
| 3 | 2203667-003F | MKTF-35 | 500AMBHDP | Groundw | 3/10/2022 9:00:00 AM | 1 | Total Cyanide -03 |
| 4 | 2203667-004F | OW-57 | 500AMBHDP | Groundw | 3/10/2022 9:30:00 AM | 1 | Total Cyanide -04 |
| 5 | 2203667-005F | OW-58 | 500AMBHDP | Groundw | 3/10/2022 10:00:00 AM | 1 | Total Cyanide -05 |
| 6 | 2203667-006F | OW-58A | 500AMBHDP | Groundw | 3/10/2022 10:30:00 AM | 1 | Total Cyanide -06 |
| 7 | 2203667-007F | OW-63 | 500AMBHDP | Groundw | 3/10/2022 9:30:00 AM | 1 | Total Cyanide -07 |
| 8 | 2203667-008F | DUP 3-10-22 | 500AMBHDP | Groundw | 3/10/2022 | 1 | Total Cyanide -08 |

L1471288

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☒ N If Applicable
 COC Signed/Accurate: ☒ Y ☒ N VOA Zero Headspace: ☒ Y ☒ N
 Bottles arrive intact: ☒ Y ☒ N Pres. Correct/Check: ☒ Y ☒ N
 Correct bottles used: ☒ Y ☒ N
 Sufficient volume sent: ☒ Y ☒ N
 RAD Screen <0.5 mR/hr: ☒ Y ☒ N

1.7+0=1.7

cnt=8 TB=0

5528 5947 9308

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------------|-----------------------|----------------------------------|----------------------|-------------------|---|--|
| Relinquished By: | Date: 3/11/2022 | Time: 11:07 AM | Received By: T. Robertson | Date: 3/15/22 | Time: 9:30 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples _____ °C Attempt to Cool? _____ | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |



April 05, 2022

Vista Work Order No. 2203119

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on March 15, 2022 under your Project Name '2203667'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2203119**Case Narrative****Sample Condition on Receipt:**

Two groundwater samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:**PFAS Isotope Dilution Method**

Sample "OW-63" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

QC Anomalies

| LabNumber | SampleName | Analysis | Analyte | Flag | %Rec |
|------------|------------|------------------------------|-----------|------|------|
| 2203119-01 | OW-63 | PFAS Isotope Dilution Method | 13C3-PFBA | H | 19.5 |

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

| Vista
Sample ID | Client
Sample ID | Sampled | Received | Components/Containers |
|--------------------|---------------------|-----------------|-----------------|-----------------------|
| 2203119-01 | OW-63 | 10-Mar-22 09:30 | 15-Mar-22 09:50 | HDPE Bottle, 250 mL |
| | | | | HDPE Bottle, 250 mL |
| 2203119-02 | PFAS-FB | 10-Mar-22 09:30 | 15-Mar-22 09:50 | HDPE Bottle, 250 mL |

ANALYTICAL RESULTS

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | |
|-------------------------|--|--------------|----------|-----------------|------------------------------|-----------|-----------|-----------------|----------|
| Client Data | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22C148-BLK1 | Column: | BEH C18 | | |
| Project: | 2203667 | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFPeA | 2706-90-3 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFBS | 375-73-5 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 4:2 FTS | 757124-72-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFHxA | 307-24-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFPeS | 2706-91-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFHpA | 375-85-9 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFHxS | 355-46-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFOA | 335-67-1 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFHpS | 375-92-8 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFNA | 375-95-1 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFOSA | 754-91-6 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFOS | 1763-23-1 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFDA | 335-76-2 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFNS | 68259-12-1 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| MeFOSAA | 2355-31-9 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| EtFOSAA | 2991-50-6 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFUnA | 2058-94-8 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFDS | 335-77-3 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFDoA | 307-55-1 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFTTrDA | 72629-94-8 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| PFTeDA | 376-06-7 | ND | 2.00 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 78.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C3-PFPeA | IS | 80.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C3-PFBS | IS | 92.0 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C2-4:2 FTS | IS | 77.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C2-PFHxA | IS | 81.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C4-PFHpA | IS | 84.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C3-PFHxS | IS | 88.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C2-6:2 FTS | IS | 83.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C5-PFNA | IS | 80.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C8-PFOSA | IS | 57.6 | 10 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C2-PFOA | IS | 85.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C8-PFOS | IS | 85.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |
| 13C2-PFDA | IS | 83.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 |

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | | |
|--|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2203667</div> <div>Matrix: Aqueous</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: B22C148-BLK1
Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-8:2 FTS | IS | 87.1 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |
| d3-MeFOSAA | IS | 72.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |
| 13C2-PFUnA | IS | 76.1 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |
| d5-EtFOSAA | IS | 66.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |
| 13C2-PFDoA | IS | 63.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |
| 13C2-PFTeDA | IS | 64.9 | 20 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 01:14 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | | | Laboratory Data | | | | | |
|-------------------|--|------------------|-----------|---------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | | | Matrix: | Aqueous | Lab Sample: | B22C148-BS1 | Column: | BEH C18 | | |
| Project: | 2203667 | | | | | | | | | | |
| Analyte | CAS Number | Amt Found (ng/L) | Spike Amt | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 42.0 | 40.0 | 105 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFPeA | 2706-90-3 | 40.0 | 40.0 | 100 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFBS | 375-73-5 | 45.0 | 40.0 | 112 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 4:2 FTS | 757124-72-4 | 36.9 | 40.0 | 92.4 | 60 - 145 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFHxA | 307-24-4 | 38.7 | 40.0 | 96.8 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFPeS | 2706-91-4 | 45.2 | 40.0 | 113 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFHpA | 375-85-9 | 40.2 | 40.0 | 101 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFHxS | 355-46-4 | 40.9 | 40.0 | 102 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 6:2 FTS | 27619-97-2 | 38.6 | 40.0 | 96.5 | 60 - 140 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFOA | 335-67-1 | 39.1 | 40.0 | 97.7 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFHpS | 375-92-8 | 42.6 | 40.0 | 107 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFNA | 375-95-1 | 43.3 | 40.0 | 108 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFOSA | 754-91-6 | 35.6 | 40.0 | 88.9 | 65 - 140 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFOS | 1763-23-1 | 38.6 | 40.0 | 96.4 | 65 - 140 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFDA | 335-76-2 | 40.8 | 40.0 | 102 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 8:2 FTS | 39108-34-4 | 42.9 | 40.0 | 107 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFNS | 68259-12-1 | 37.7 | 40.0 | 94.3 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| MeFOSAA | 2355-31-9 | 37.0 | 40.0 | 92.6 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| EtFOSAA | 2991-50-6 | 41.7 | 40.0 | 104 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFUnA | 2058-94-8 | 38.7 | 40.0 | 96.7 | 65 - 140 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFDS | 335-77-3 | 38.8 | 40.0 | 96.9 | 50 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFDaA | 307-55-1 | 43.3 | 40.0 | 108 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFTTrDA | 72629-94-8 | 39.2 | 40.0 | 97.9 | 60 - 140 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| PFTeDA | 376-06-7 | 39.2 | 40.0 | 98.0 | 65 - 135 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| Labeled Standards | Type | | | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | | | 85.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C3-PFPeA | IS | | | 87.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C3-PFBS | IS | | | 87.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-4:2 FTS | IS | | | 98.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-PFHxA | IS | | | 93.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C4-PFHpA | IS | | | 89.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C3-PFHxS | IS | | | 94.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-6:2 FTS | IS | | | 99.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C5-PFNA | IS | | | 86.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C8-PFOSA | IS | | | 62.7 | 10 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | | Laboratory Data | | | | |
|-------------------|--|---------|----------|------------|-----------------|-------------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | | Lab Sample: | B22C148-BS1 | Column: | BEH C18 | |
| Project: | 2203667 | | | | | | | | |
| Labeled Standards | Type | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C2-PFOA | IS | 98.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C8-PFOS | IS | 86.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-PFDA | IS | 86.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-8:2 FTS | IS | 80.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| d3-MeFOSAA | IS | 88.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-PFUnA | IS | 80.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| d5-EtFOSAA | IS | 77.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-PFDoA | IS | 83.0 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |
| 13C2-PFTeDA | IS | 81.4 | 20 - 150 | | B22C148 | 29-Mar-22 | 0.250 L | 01-Apr-22 18:10 | 1 |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|-------------------|--|--------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Groundwater | Lab Sample: | 2203119-01 | | Column: | BEH C18 | |
| Project: | 2203667 | | Date Collected: | 10-Mar-22 09:30 | Date Received: | 15-Mar-22 09:50 | | | | |
| Location: | 2203667-007G | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFPeA | 2706-90-3 | 486 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFBS | 375-73-5 | 41.9 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFHxA | 307-24-4 | 347 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFPeS | 2706-91-4 | 41.7 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFHpA | 375-85-9 | 128 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFHxS | 355-46-4 | 263 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 6:2 FTS | 27619-97-2 | 679 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFOA | 335-67-1 | 124 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFHpS | 375-92-8 | 9.19 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFNA | 375-95-1 | 523 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFOSA | 754-91-6 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFOS | 1763-23-1 | 351 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFDA | 335-76-2 | 11.2 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 8:2 FTS | 39108-34-4 | 70.8 | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFNS | 68259-12-1 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFUnA | 2058-94-8 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFDS | 335-77-3 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFDoA | 307-55-1 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| PFTeDA | 376-06-7 | ND | 2.09 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 19.5 | 25 - 150 | H | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C3-PFPeA | IS | 87.0 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C3-PFBS | IS | 82.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-4:2 FTS | IS | 72.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-PFHxA | IS | 80.1 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C4-PFHpA | IS | 82.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C3-PFHxS | IS | 79.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-6:2 FTS | IS | 87.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C5-PFNA | IS | 76.0 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C8-PFOSA | IS | 50.8 | 10 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-PFOA | IS | 85.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C8-PFOS | IS | 92.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|---|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2203667
Location: 2203667-007G</div> <div>Matrix: Groundwater
Date Collected: 10-Mar-22 09:30</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: 2203119-01
Date Received: 15-Mar-22 09:50</div> <div>Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-PFDA | IS | 79.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-8:2 FTS | IS | 76.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| d3-MeFOSAA | IS | 77.8 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-PFUnA | IS | 74.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| d5-EtFOSAA | IS | 72.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-PFDoA | IS | 71.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |
| 13C2-PFTeDA | IS | 65.3 | 20 - 150 | | B22C148 | 29-Mar-22 | 0.239 L | 01-Apr-22 18:20 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

| Sample ID: PFAS-FB | | | | | PFAS Isotope Dilution Method | | | | | |
|--------------------|--|--------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Groundwater | Lab Sample: | 2203119-02 | | Column: | BEH C18 | |
| Project: | 2203667 | | Date Collected: | 10-Mar-22 09:30 | Date Received: | 15-Mar-22 09:50 | | | | |
| Location: | 2203667-010A | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFPeA | 2706-90-3 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFBS | 375-73-5 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFHxA | 307-24-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFPeS | 2706-91-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFHpA | 375-85-9 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFHxS | 355-46-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 6:2 FTS | 27619-97-2 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFOA | 335-67-1 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFHpS | 375-92-8 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFNA | 375-95-1 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFOSA | 754-91-6 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFOS | 1763-23-1 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFDA | 335-76-2 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 8:2 FTS | 39108-34-4 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFNS | 68259-12-1 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFUnA | 2058-94-8 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFDS | 335-77-3 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFDoA | 307-55-1 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| PFTeDA | 376-06-7 | ND | 1.99 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 74.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C3-PFPeA | IS | 80.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C3-PFBS | IS | 97.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-4:2 FTS | IS | 82.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-PFHxA | IS | 78.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C4-PFHpA | IS | 82.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C3-PFHxS | IS | 84.6 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-6:2 FTS | IS | 89.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C5-PFNA | IS | 79.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C8-PFOSA | IS | 68.9 | 10 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-PFOA | IS | 83.9 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C8-PFOS | IS | 87.5 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |

| Sample ID: PFAS-FB | | | | | PFAS Isotope Dilution Method | | | | | |
|---|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2203667
Location: 2203667-010A</div> <div>Matrix: Groundwater
Date Collected: 10-Mar-22 09:30</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: 2203119-02
Date Received: 15-Mar-22 09:50</div> <div>Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-PFDA | IS | 83.2 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-8:2 FTS | IS | 77.1 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| d3-MeFOSAA | IS | 81.7 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-PFUnA | IS | 88.1 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| d5-EtFOSAA | IS | 75.4 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-PFDoA | IS | 74.3 | 25 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |
| 13C2-PFTeDA | IS | 65.4 | 20 - 150 | | B22C148 | 29-Mar-22 | 0.251 L | 01-Apr-22 02:06 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

| | |
|---------|--|
| B | This compound was also detected in the method blank |
| Conc. | Concentration |
| CRS | Cleanup Recovery Standard |
| D | Dilution |
| DL | Detection Limit |
| E | The associated compound concentration exceeded the calibration range of the instrument |
| H | Recovery and/or RPD was outside laboratory acceptance limits |
| I | Chemical Interference |
| IS | Internal Standard |
| J | The amount detected is below the Reporting Limit/LOQ |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| M | Estimated Maximum Possible Concentration (CA Region 2 projects only) |
| MDL | Method Detection Limit |
| NA | Not applicable |
| ND | Not Detected |
| OPR | Ongoing Precision and Recovery sample |
| P | The reported concentration may include contribution from chlorinated diphenyl ether(s). |
| Q | The ion transition ratio is outside of the acceptance criteria. |
| RL | Reporting Limit |
| RL | For 537.1, the reported RLs are the MRLs. |
| TEQ | Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations. |
| TEQMax | TEQ calculation that uses the detection limit as the concentration for non-detects |
| TEQMin | TEQ calculation that uses zero as the concentration for non-detects |
| TEQRisk | TEQ calculation that uses ½ the detection limit as the concentration for non-detects |
| U | Not Detected (specific projects only) |
| * | See Cover Letter |

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

| Accrediting Authority | Certificate Number |
|--|---------------------------|
| Alaska Department of Environmental Conservation | 17-013 |
| Arkansas Department of Environmental Quality | 21-023-0 |
| California Department of Health – ELAP | 2892 |
| DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005 | 3091.01 |
| Florida Department of Health | E87777-26 |
| Hawaii Department of Health | N/A |
| Louisiana Department of Environmental Quality | 01977 |
| Maine Department of Health | 2020018 |
| Massachusetts Department of Environmental Protection | M-CA413 |
| Michigan Department of Environmental Quality | 9932 |
| Minnesota Department of Health | 1980678 |
| New Hampshire Environmental Accreditation Program | 207720 |
| New Jersey Department of Environmental Protection | CA003 |
| New York Department of Health | 11411 |
| Ohio Environmental Protection Agency | 87778 |
| Oregon Laboratory Accreditation Program | 4042-016 |
| Pennsylvania Department of Environmental Protection | 017 |
| Texas Commission on Environmental Quality | T104704189-21-12 |
| Vermont Department of Health | VT-4042 |
| Virginia Department of General Services | 10769 |
| Washington Department of Ecology | C584 |
| Wisconsin Department of Natural Resources | 998036160 |

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

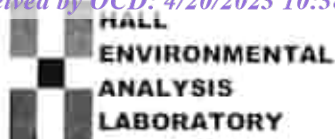
| MATRIX: Air | |
|---|-----------|
| Description of Test | Method |
| Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans | EPA 23 |
| Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS | EPA TO-9A |

| MATRIX: Biological Tissue | |
|---|----------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537 |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Drinking Water | |
|---|----------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613/1613B |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537.1 |
| Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry | EPA 533 |
| Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry | ISO 25101 2009 |

| MATRIX: Non-Potable Water | |
|---|----------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537 |
| Dioxin by GC/HRMS | EPA 613 |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Solids | |
|---|----------------|
| Description of Test | Method |
| Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613 |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537 |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

Hall Environmental Analysis Laboratory

2901 Divisadero St.

Albuquerque, NM 87109

TEL: 505-545-3978

FAX: 505-545-4107

Website: clients.hallenvironmental.com

2203119

0.7°C

| | | | | | | | | | | |
|------------------|--|---------------------------|--|---------|-----------------------------|-----------|-------|----------------|--|-----|
| SUBSTRATION | | Vista Analytical Labor | | COMPANY | Vista Analytical Laboratory | | PHONE | (916) 673-1520 | | FAX |
| ADDRESS | | 1104 Windfield Way | | | | ACTUATOR# | | EMAIL | | |
| CITY, STATE, ZIP | | El Dorado Hills, CA 95762 | | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|---|
| 1 | 2203667-007G | OW-63 | Z50HDPE | Groundw | 3/10/2022 9:30:00 AM | 24 compound PFAS testing unchlorinated sample |
| 2 | 2203667-010A | PFAS-FB | Z50HDPE | Groundw | 3/10/2022 9:30:00 AM | 1 24 compound PFAS testing unchlorinated sample |

SPECIAL INSTRUCTIONS/COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------|----------------|--------------|----------------|-------------|---|---|
| Requisitioned By: | Date: 03/11/2022 | Time: 11:15 AM | Received By: | Date: 03/15/22 | Time: 09:50 | REPORT TRANSMITTAL DESIRED: | |
| Requisitioned By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARD COPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| Requisitioned By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: ☒ Standard ☐ RUSH ☐ Next Bld ☐ 2nd Bld ☐ 3rd Bld | | | | | | Temp of sample: °C <input type="text"/> Allow to Cool: <input type="text"/> | |
| | | | | | | Comments: <input type="text"/> | |



Sample Log-In Checklist

Page # 1 of 1Vista Work Order #: 2203119 TAT 1+1

| | | | |
|-----------------------------------|------------------------------------|-----------------------|-----------------------------|
| Samples Arrival: | Date/Time
<u>03/15/22 09:50</u> | Initials:
<u>K</u> | Location: <u>WR-2</u> |
| | | | Shelf/Rack: <u>N12</u> |
| Delivered By: | <u>FedEx</u> | UPS | On Trac |
| | | GLS | DHL |
| | | Hand Delivered | Other |
| Preservation: | Ice | <u>Blue Ice</u> | Techni Ice |
| | | Dry Ice | None |
| Temp °C: <u>0.8</u> (uncorrected) | Probe used: Y <u>(N)</u> | | Thermometer ID: <u>IR-3</u> |
| Temp °C: <u>3.2</u> (corrected) | | | |

| | YES | NO | NA |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| Shipping Container(s) Intact? | ☒ | | |
| Shipping Custody Seals Intact? | ☒ | | |
| Airbill <u> </u> Trk# <u>7762 9348 0851</u> | ☒ | | |
| Shipping Documentation Present? | ☒ | | |
| Shipping Container | Vista | <u>Client</u> | Retain |
| | | <u>Return</u> | Dispose |
| Chain of Custody / Sample Documentation Present? | ☒ | | |
| Chain of Custody / Sample Documentation Complete? | ☒ | | |
| Holding Time Acceptable? | ☒ | | |
| Logged In: | Date/Time
<u>03/15/22 12:42</u> | Initials:
<u>K</u> | Location: <u>R-13, WR-2</u> |
| | | | Shelf/Rack: <u>A-7, F-6</u> |
| COC Anomaly/Sample Acceptance Form completed? | | ☒ | ☒ |

Comments:

CoC/Label Reconciliation Report WO# 2203119

| Lab Number | CoC Sample ID | Sample Alias | Sample Date/Time | Container | Base Matrix | Sample Comments |
|------------|---------------|--------------|------------------|---------------------|-------------|-----------------|
| 2203119-01 | A OW-63 | 2203667-007G | 10-Mar-22 09:10 | HDPE Bottle, 250 mL | Aqueous | |
| 2203119-01 | B OW-63 | 2203667-007G | 10-Mar-22 09:10 | HDPE Bottle, 250 mL | Aqueous | |
| 2203119-02 | A PFAS-FB | 2203667-010A | 10-Mar-22 09:10 | HDPE Bottle, 250 mL | Aqueous | |

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

| | Yes | No | NA |
|---|-----|----|----|
| Sample Container Intact? | ✓ | | |
| Sample Custody Seals Intact? | | | ✓ |
| Adequate Sample Volume? | ✓ | | |
| Container Type Appropriate for Analysis(es) | ✓ | | |

Comments:

(A): NO BACKUP VOLUME
(B): ESS TRISMA LABEL

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 None Other

Verified by/Date:

3/15/22

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049709 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049711 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.8 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.3 | 50 | 150 | | | J |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 79.1 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.1 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 120 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049776 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66641 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66641 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075581 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-66641 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66641 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075582 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0030 | 0.002000 | 0 | 102 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.0 | 50 | 150 | | | J |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.0 | 50 | 150 | | | J |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 97.2 | 50 | 150 | | | J |
| Cobalt | 0.0069 | 0.0060 | 0.006000 | 0 | 115 | 50 | 150 | | | |
| Nickel | 0.0038 | 0.010 | 0.005000 | 0 | 75.2 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 95.5 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 105 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 113 | 50 | 150 | | | |

| Sample ID: LCS-66641 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66641 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075583 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.9 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.2 | 85 | 115 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.0 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-66642 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 66642 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075584 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------|--------------------------------|-----------|---|------|----------|--------------------|------|----------|------|
| Sample ID: LLCS-66642 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 66642 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3075585 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0030 | 0.002000 | 0 | 88.4 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.0 | 50 | 150 | | | J |
| Cadmium | 0.0016 | 0.0020 | 0.002000 | 0 | 78.0 | 50 | 150 | | | J |
| Chromium | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 67.7 | 50 | 150 | | | J |
| Silver | 0.0044 | 0.0050 | 0.005000 | 0 | 88.7 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 107 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-66642 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 66642 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075586 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.3 | 85 | 115 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.3 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203667-004DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-57 | | Batch ID: 66642 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3075660 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 93.6 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.3 | 70 | 130 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 91.1 | 70 | 130 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0.05548 | 90.9 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0.003622 | 100 | 70 | 130 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 90.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|-------|----------|------|
| Sample ID: 2203667-004DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-57 | | Batch ID: 66642 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3075661 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0.128 | 20 | |
| Cadmium | 0.45 | 0.0020 | 0.5000 | 0 | 90.5 | 70 | 130 | 3.44 | 20 | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 93.1 | 70 | 130 | 4.36 | 20 | |
| Cobalt | 0.44 | 0.0060 | 0.5000 | 0 | 87.8 | 70 | 130 | 3.67 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0.05548 | 87.2 | 70 | 130 | 3.70 | 20 | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.1 | 70 | 130 | 4.69 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.003622 | 98.5 | 70 | 130 | 1.94 | 20 | |
| Zinc | 0.43 | 0.010 | 0.5000 | 0 | 86.7 | 70 | 130 | 4.02 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2203667-005DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-58 | | Batch ID: 66642 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3075666 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 91.4 | 70 | 130 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.1 | 70 | 130 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 90.1 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0.05068 | 89.1 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.004904 | 99.9 | 70 | 130 | | | |
| Zinc | 0.44 | 0.010 | 0.5000 | 0 | 88.5 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2203667-005DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-58 | | Batch ID: 66642 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3075667 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0.132 | 20 | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 92.1 | 70 | 130 | 0.776 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.2 | 70 | 130 | 2.19 | 20 | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 91.8 | 70 | 130 | 1.86 | 20 | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0.05068 | 90.9 | 70 | 130 | 1.88 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | 0.950 | 20 | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0.004904 | 100 | 70 | 130 | 0.518 | 20 | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 90.3 | 70 | 130 | 2.10 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203667-004DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-57 | | Batch ID: 66642 | | RunNo: 87067 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/7/2022 | | SeqNo: 3077717 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 3.8 | 0.015 | 0.5000 | 3.376 | 77.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203667-004DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-57 | | Batch ID: 66642 | | RunNo: 87067 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/7/2022 | | SeqNo: 3077718 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 3.9 | 0.015 | 0.5000 | 3.376 | 99.8 | 70 | 130 | 2.94 | 20 | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: PBW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088697 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LLLCS | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088702 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0030 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A87332 | | RunNo: 87332 | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | | SeqNo: 3088704 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049710 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049712 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 105 | 50 | 150 | | | |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.8 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.3 | 50 | 150 | | | J |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 79.1 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.1 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 120 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A86443 | RunNo: 86443 | | | | | | | | |
| Prep Date: | Analysis Date: 3/14/2022 | SeqNo: 3049777 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088745 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LLLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088746 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088747 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------|---------------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053956 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | ND | 0.00050 |

| | | |
|---------------------------|---------------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053957 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.00049 | 0.00050 0.0005000 0 98.2 50 150 J |

| | | |
|------------------------|---------------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053958 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.012 | 0.00050 0.01250 0 97.4 85 115 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66191 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66191 | RunNo: 86564 |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055017 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66191 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66191 | RunNo: 86564 |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055018 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0012 | 0.0010 0.001000 0 120 50 150 |
| Arsenic | 0.0012 | 0.0010 0.001000 0 117 50 150 |
| Lead | 0.00051 | 0.00050 0.0005000 0 103 50 150 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66191 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66191 | RunNo: 86564 |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | SeqNo: 3055019 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-66191 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055019 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLLCS-66191 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 66191 | | RunNo: 86564 | | | | | | | |
| Prep Date: 3/15/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3055052 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00078 | 0.0010 | 0.001000 | 0 | 78.5 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A86482 | RunNo: 86482 | | | | | | | | |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051645 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86482 | RunNo: 86482 | | | | | | | | |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051646 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00068 | 0.0010 | 0.001000 | 0 | 67.8 | 50 | 150 | | | J |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.1 | 50 | 150 | | | J |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 126 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A86482 | RunNo: 86482 | | | | | | | | |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051647 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.022 | 0.0010 | 0.02500 | 0 | 87.5 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.4 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 98.2 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203667-001EMS | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB 3-10-22 | Batch ID: A86482 | RunNo: 86482 | | | | | | | | |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051681 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.020 | 0.0010 | 0.02500 | 0 | 81.0 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203667-001EMSD | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB 3-10-22 | Batch ID: A86482 | RunNo: 86482 | | | | | | | | |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051682 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.4 | 70 | 130 | 11.0 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2203667-001EMSD | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB 3-10-22 | Batch ID: A86482 | RunNo: 86482 |
| Prep Date: | Analysis Date: 3/15/2022 | SeqNo: 3051682 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.026 | 0.0010 0.02500 0 104 70 130 0.806 20 |
| Selenium | 0.026 | 0.0010 0.02500 0 105 70 130 5.66 20 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2203667-002EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: MKTF-46 | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053989 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.011 | 0.00050 0.01250 0 88.5 70 130 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2203667-002EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: MKTF-46 | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053990 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.011 | 0.00050 0.01250 0 89.3 70 130 0.906 20 |

| | | |
|-----------------------|---------------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3055193 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | ND | 0.00050 |

| | | |
|---------------------------|---------------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BatchQC | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3055194 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.00049 | 0.00050 0.0005000 0 98.2 50 150 J |

| | | |
|------------------------|---------------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: LCSW | Batch ID: A86537 | RunNo: 86537 |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3055195 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.012 | 0.00050 0.01250 0 97.4 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-66283 | | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: PBW | | Batch ID: 66283 | | RunNo: 86625 | | | | | | |
| Prep Date: 3/21/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3058101 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-66283 | | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | | Batch ID: 66283 | | RunNo: 86625 | | | | | | |
| Prep Date: 3/21/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3058102 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00016 | 0.00020 | 0.0001500 | 0 | 108 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-66283 | | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | | Batch ID: 66283 | | RunNo: 86625 | | | | | | |
| Prep Date: 3/21/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3058103 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0049 | 0.00020 | 0.005000 | 0 | 98.0 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------|-------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 2203667-008DMS | | SampType: MS | | | TestCode: EPA Method 245.1: Mercury | | | | | |
| Client ID: DUP 3-10-22 | | Batch ID: 66283 | | | RunNo: 86625 | | | | | |
| Prep Date: 3/21/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3058159 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.0010 | 0.005000 | 0 | 104 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203667-008DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: DUP 3-10-22 | | Batch ID: 66283 | | RunNo: 86625 | | | | | | |
| Prep Date: 3/21/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3058160 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0051 | 0.0010 | 0.005000 | 0 | 102 | 75 | 125 | 2.15 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66149 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66149 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052009 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66149 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66149 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052010 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66149 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66149 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052120 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 0.1000 0 94.4 70 130 |

| | | |
|-----------------------|--------------------------|--|
| Sample ID: LCSD-66149 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 66149 | RunNo: 86477 |
| Prep Date: 3/15/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052127 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.093 | 0.010 0.1000 0 93.1 70 130 1.37 20 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66232 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054885 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66232 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66232 | RunNo: 86558 |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | SeqNo: 3054886 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-66232 | SampType: LCS | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSW | Batch ID: 66232 | | | RunNo: 86558 | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | | | SeqNo: 3054887 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 97.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-66232 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 66232 | | | RunNo: 86558 | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/17/2022 | | | SeqNo: 3054888 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 | 0.1000 | 0 | 94.2 | 70 | 130 | 3.77 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66129 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052729 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.026 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.7 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66129 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052743 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 60.5 | 31.7 | 75.4 | 3.68 | 20 | |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.9 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66129 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66129 | RunNo: 86465 | | | | | | | | |
| Prep Date: 3/11/2022 | Analysis Date: 3/15/2022 | SeqNo: 3052754 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 58.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.6 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66219 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66219 | RunNo: 86571 | | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | SeqNo: 3057145 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.018 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.037 | | 0.03750 | | 98.4 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66219 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66219 | RunNo: 86571 | | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | SeqNo: 3057146 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 77.8 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.022 | | 0.01875 | | 116 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-66219 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 66219 | | | RunNo: 86571 | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | | | SeqNo: 3057152 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 70.5 | 31.7 | 75.4 | 9.82 | 20 | |
| Surr: DNOP | 0.019 | | 0.01875 | | 99.4 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3056870 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 94.9 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.1 | | 10.00 | | 91.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203667-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-46 | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3056878 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 92.6 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0.1862 | 103 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.1 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 84.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 94.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203667-002amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-46 | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3056879 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 17 | 1.0 | 20.00 | 0 | 86.5 | 70 | 130 | 6.80 | 20 | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | 3.59 | 20 | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0.1862 | 102 | 70 | 130 | 1.34 | 20 | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 80.8 | 70 | 130 | 6.34 | 20 | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 77.8 | 70 | 130 | 8.65 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.6 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86601 | | | RunNo: 86601 | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | | SeqNo: 3056908 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.1 | | 10.00 | | 91.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.1 | | 10.00 | | 90.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058196 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 93.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058226 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.68 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058226 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66142 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 66142 | | RunNo: 86559 | | | | | | | |
| Prep Date: 3/14/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3054966 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 61.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 91 | | 200.0 | | 45.6 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 65.3 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 61.8 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.5 | 48 | 155 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66142 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 66142 | | RunNo: 86559 | | | | | | | |
| Prep Date: 3/14/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3054967 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 52.5 | 15 | 87.6 | | | |
| Phenol | 75 | 5.0 | 200.0 | 0 | 37.5 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.2 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 38.0 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 71.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.3 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 63 | | 100.0 | | 62.6 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 97 | | 100.0 | | 96.6 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66142 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66142 | | RunNo: 86559 | | | | | | | |
| Prep Date: 3/14/2022 | Analysis Date: 3/17/2022 | | SeqNo: 3054968 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: LCSD-66142 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 66142 | | | RunNo: 86559 | | | | | | |
| Prep Date: 3/14/2022 | Analysis Date: 3/17/2022 | | | SeqNo: 3054968 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 43.8 | 15 | 87.6 | 18.1 | 30.4 | |
| Phenol | 58 | 5.0 | 200.0 | 0 | 29.2 | 16.8 | 70.5 | 24.9 | 37.2 | |
| Surr: 2-Fluorophenol | 74 | | 200.0 | | 37.2 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 61 | | 200.0 | | 30.4 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 57.2 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 51.8 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 49.7 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 91.0 | 48 | 155 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66142 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86533 | RunNo: 86533 | | | | | | | | |
| Prep Date: | Analysis Date: 3/16/2022 | SeqNo: 3053785 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 73 | | 100.0 | | 73.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 92 | | 200.0 | | 46.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 68 | | 100.0 | | 67.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 104 | 72.3 | 147 | | | E |

| Sample ID: lcs-66142 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86533 | RunNo: 86533 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053786 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 70 | 0.10 | 100.0 | 0 | 69.9 | 29.8 | 82.7 | | | E |
| Pyrene | 100 | 0.20 | 100.0 | 0 | 99.8 | 51 | 113 | | | E |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 65.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 66.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 86 | | 100.0 | | 86.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 112 | 72.3 | 147 | | | E |

| Sample ID: lcsd-66142 | SampType: LCSD | TestCode: EPA Method 8270SIM | | | | | | | | |
|------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: R86533 | RunNo: 86533 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053787 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 46 | 0.10 | 100.0 | 0 | 46.4 | 29.8 | 82.7 | 40.5 | 27.8 | ER |
| Pyrene | 100 | 0.20 | 100.0 | 0 | 103 | 51 | 113 | 2.96 | 20 | E |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 52.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 57.7 | 22 | 101 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: lcsd-66142 | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | | Batch ID: R86533 | | RunNo: 86533 | | | | | | |
| Prep Date: | | Analysis Date: 3/17/2022 | | SeqNo: 3053787 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 52 | | 100.0 | | 51.8 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 119 | 72.3 | 147 | 0 | 0 | E |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057007 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203667-003ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-35 | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057011 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 53 | 0.50 | 5.000 | 43.28 | 195 | 70 | 130 | | | S |
| Surr: 4-Bromofluorobenzene | 99 | | 100.0 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|------|---|-------------|--------------------|----------|-----------|--------|----------|------|
| Sample ID: 2203667-003amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-35 | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057012 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 53 | 0.50 | 5.000 | 43.28 | 196 | 70 | 130 | 0.0490 | 20 | S |
| Surr: 4-Bromofluorobenzene | 97 | | 100.0 | | 97.3 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057029 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.044 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058229 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058249 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203667

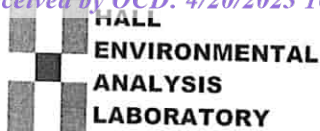
22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058249 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.034 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203667

RcptNo: 1

Received By: Cheyenne Cason

3/11/2022 8:00:00 AM

Completed By: Desiree Dominguez

3/11/2022 9:07:44 AM

Reviewed By: *See 3/11/22*Chain of Custody1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? CourierLog In3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐5. Sample(s) in proper container(s)? Samples not frozen
Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒10. Were any sample containers received broken? Yes ☐ No ☒11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐# of preserved bottles checked for pH: 16 8
(<2 or >12 unless noted)Adjusted? noChecked by: Cm 3/11/22Labeled APG 3/11/22Special Handling (if applicable)15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.3 | Good | Yes | | | |
| 2 | 0.8 | Good | Yes | | | |
| 3 | -0.8 | Good | Yes | | | |
| 4 | -0.5 | Good | Yes | | | |
| 5 | 1.1 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 21, 2022

Brian McLoughlin
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203670

Dear Brian McLoughlin:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/11/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

| | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|---------------------------------------|-----|-------------------------------------|------|-------|----|----------------------|----------|
| Hall Environmental Analysis Laboratory, Inc. | | | | | | | | | | Analytical Report | | | | | | | |
| | | | | | | | | | | Lab Order: 2203670 | | | | | | | |
| | | | | | | | | | | Date Reported: 3/21/2022 | | | | | | | |
| CLIENT: Marathon | | | | | | | | | | Client Sample ID: OW-57 | | | | | | | |
| Project: 2022 GW Sampling 1st Qtr | | | | | | | | | | Collection Date: 3/10/2022 9:30:00 AM | | | | | | | |
| Lab ID: 2203670-001 | | | | | | | | | | Matrix: GROUNDWA | | Received Date: 3/11/2022 8:00:00 AM | | | | | |
| Analyses | | | | | | | | | | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
| SM 2540D: TSS | | | | | | | | | | Analyst: KS | | | | | | | |
| Suspended Solids | | | | | | | | | | 29 | 4.0 | 4.0 | | mg/L | 1 | 3/17/2022 7:22:00 AM | 66210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | | |
|-------------|-----|--|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 1 of 3 |
| | D | Sample Diluted Due to Matrix | E | Estimated value | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit | |
| | S | % Recovery outside of range due to dilution or matrix interference | | | |
| | | | | | |

| Hall Environmental Analysis Laboratory, Inc. | | | | | | | | | | Analytical Report | | |
|--|--|--|--|--|--|-----|-----|------|-------|-------------------------------------|----------------------|----------|
| | | | | | | | | | | Lab Order: 2203670 | | |
| | | | | | | | | | | Date Reported: 3/21/2022 | | |
| CLIENT: Marathon | | | | | Client Sample ID: OW-58A | | | | | | | |
| Project: 2022 GW Sampling 1st Qtr | | | | | Collection Date: 3/10/2022 10:30:00 AM | | | | | | | |
| Lab ID: 2203670-002 | | | | | Matrix: GROUNDWA | | | | | Received Date: 3/11/2022 8:00:00 AM | | |
| Analyses | | | | | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
| SM 2540D: TSS | | | | | | | | | | Analyst: KS | | |
| Suspended Solids | | | | | 30 | 4.0 | 4.0 | | mg/L | 1 | 3/17/2022 7:22:00 AM | 66210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | | |
|-------------|-----|--|----|---|-------------|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank | Page 2 of 3 |
| | D | Sample Diluted Due to Matrix | E | Estimated value | |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits | |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range | |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit | |
| | S | % Recovery outside of range due to dilution or matrix interference | | | |

Client:

Marathon

Project:

2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|-------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-66210 | | SampType: MBLK | | | TestCode: SM 2540D: TSS | | | | | |
| Client ID: PBW | | Batch ID: 66210 | | | RunNo: 86525 | | | | | |
| Prep Date: 3/16/2022 | | Analysis Date: 3/17/2022 | | | SeqNo: 3053365 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Suspended Solids | ND | 4.0 | | | | | | | | |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|-------------------------|----------|-------------|------|----------|------|
| Sample ID: LCS-66210 | | SampType: LCS | | | TestCode: SM 2540D: TSS | | | | | |
| Client ID: LCSW | | Batch ID: 66210 | | | RunNo: 86525 | | | | | |
| Prep Date: 3/16/2022 | | Analysis Date: 3/17/2022 | | | SeqNo: 3053366 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Suspended Solids | 92 | 4.0 | 92.40 | 0 | 99.6 | 83.44 | 119.05 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

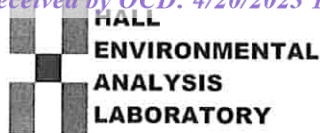
E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 3 of 3



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203670**

RcptNo: 1

Received By: **Cheyenne Cason** 3/11/2022 8:00:00 AMCompleted By: **Desiree Dominguez** 3/11/2022 9:13:08 AMReviewed By: *S&L 3/11/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐
5. Sample(s) in proper container(s)? Samples not frozen
Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *Chc 3/11/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

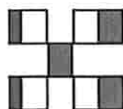
Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.3 | Good | Yes | | | |
| 2 | 0.8 | Good | Yes | | | |
| 3 | -0.8 | Good | Yes | | | |
| 4 | -0.5 | Good | Yes | | | |
| 5 | 1.1 | Good | Yes | | | |



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Any necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 28, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203825

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 11 sample(s) on 3/16/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Case Narrative

WO#: 2203825
Date: 3/28/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270:

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.23 | 0.23 | 1.0 | J | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 2-Butanone | 7.3 | 2.0 | 10 | J | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Chloromethane | 0.91 | 0.41 | 3.0 | J | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 90.6 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 96.6 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Surr: Dibromofluoromethane | 94.9 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:00:49 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.037 | 0.012 | 0.050 | J | mg/L | 1 | 3/19/2022 1:00:49 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:00:49 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 4:05:39 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.026 | 0.016 | 0.064 | J | mg/L | 1 | 3/18/2022 4:29:41 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 4:29:41 PM | 66219 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 4:29:41 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: 2-Fluorophenol | 42.7 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: Phenol-d5 | 32.0 | 0 | 28.5-64.7 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 50.8 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: Nitrobenzene-d5 | 53.8 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 54.8 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 91.6 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 12:03:15 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Pyrene | ND | 0.16 | 0.40 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 12:57:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.6 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 54.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 12:57:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 101 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 12:57:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Vanadium | ND | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Barium | ND | 0.00046 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Chromium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:26:19 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:18:40 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 8:30:00 AM

Lab ID: 2203825-001E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 9:16:12 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:16:12 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:16:12 AM | A86535 |
| Zinc | 0.0063 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 9:16:12 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:05:46 PM | A86624 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Barium | 0.00082 | 0.00046 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Chromium | ND | 0.00014 | 0.0010 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Nickel | ND | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 2:46:16 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:20:49 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 2.3 | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Chloromethane | 0.77 | 0.41 | 3.0 | J | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 91.5 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Surr: Dibromofluoromethane | 93.2 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:29:19 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.041 | 0.012 | 0.050 | J | mg/L | 1 | 3/19/2022 1:29:19 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 1:29:19 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 4:20:47 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 3/18/2022 4:53:22 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 4:53:22 PM | 66219 |
| Surr: DNOP | 94.8 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 4:53:22 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: 2-Fluorophenol | 38.4 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: Phenol-d5 | 29.2 | 0 | 28.5-64.7 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 53.8 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: Nitrobenzene-d5 | 50.4 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 49.0 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 95.2 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 12:44:40 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.20 | 0.048 | 1.0 | J | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Naphthalene | 0.14 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| 1-Methylnaphthalene | 0.28 | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| 2-Methylnaphthalene | 0.40 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Phenanthrene | 0.080 | 0.057 | 0.10 | J | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Pyrene | 0.24 | 0.16 | 0.40 | J | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 1:42:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.0 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 50.9 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 1:42:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 100 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 1:42:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Vanadium | 0.044 | 0.0029 | 0.0050 | | mg/L | 5 | 3/21/2022 2:27:23 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Arsenic | 0.00069 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Barium | 0.044 | 0.0023 | 0.0050 | | mg/L | 5 | 3/21/2022 2:27:23 PM | 66254 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Chromium | 0.0031 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Lead | 0.00020 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Nickel | 0.0021 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Selenium | 0.0027 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:33:38 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:22:59 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 9:00:00 AM

Lab ID: 2203825-002E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 9:25:52 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:25:52 AM | A86535 |
| Vanadium | 0.041 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 9:25:52 AM | A86535 |
| Zinc | 0.0094 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 9:25:52 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:08:27 PM | A86624 |
| Arsenic | 0.00052 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Barium | 0.046 | 0.00046 | 0.0010 | | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Chromium | 0.00052 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Lead | 0.000077 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Nickel | 0.00052 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| Selenium | 0.0027 | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 2:48:57 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00036 | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:25:09 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 4500 | 23 | 100 | | µg/L | 100 | 3/19/2022 3:51:42 AM | R86601 |
| Toluene | 22000 | 200 | 1000 | | µg/L | 1E+ | 3/21/2022 1:20:31 PM | R86626 |
| Ethylbenzene | 1400 | 21 | 100 | | µg/L | 100 | 3/19/2022 3:51:42 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 4800 | 39 | 100 | | µg/L | 100 | 3/19/2022 3:51:42 AM | R86601 |
| 1,2,4-Trimethylbenzene | 830 | 1.2 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,3,5-Trimethylbenzene | 210 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 4.2 | 2.5 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Chloroform | 7.2 | 1.3 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,1-Dichloroethane | 7.5 | 2.7 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Isopropylbenzene | 55 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 4-Isopropyltoluene | 5.0 | 2.0 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| n-Butylbenzene | 16 | 2.5 | 30 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| n-Propylbenzene | 140 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| sec-Butylbenzene | 5.5 | 1.4 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Styrene | 2.6 | 1.4 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Vinyl chloride | 4.4 | 3.2 | 10 | J | µg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Xylenes, Total | 6800 | 37 | 150 | | µg/L | 100 | 3/19/2022 3:51:42 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 90.9 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 93.1 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Surr: Dibromofluoromethane | 87.3 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 4:20:08 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 78 | 0.12 | 0.50 | | mg/L | 10 | 3/19/2022 4:20:08 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 96.2 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 4:20:08 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 4:35:55 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 7.0 | 0.16 | 0.64 | | mg/L | 10 | 3/21/2022 2:17:33 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/21/2022 2:17:33 PM | 66219 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/21/2022 2:17:33 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 1-Methylnaphthalene | 28 | 0.60 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 2-Methylnaphthalene | 38 | 0.41 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 2-Methylphenol | 20 | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 3+4-Methylphenol | 11 | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Naphthalene | ND | 2.2 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Phenol | 7.5 | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: Phenol-d5 | 27.3 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 66.0 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: Nitrobenzene-d5 | 47.0 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 44.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 75.0 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 1:25:55 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.0 | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Acenaphthene | 1.4 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Fluorene | 3.3 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Phenanthrene | 3.3 | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Anthracene | 0.52 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Fluoranthene | 0.24 | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Pyrene | 0.42 | 0.16 | 0.40 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 2:27:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 51.0 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 47.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 2:27:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 76.2 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 2:27:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0023 | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Vanadium | 0.0062 | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Arsenic | 0.0045 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Barium | 0.45 | 0.0092 | 0.020 | | mg/L | 20 | 3/21/2022 2:32:15 PM | 66254 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Chromium | 0.0031 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Lead | 0.0021 | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Nickel | 0.0076 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| Zinc | 0.049 | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:38:31 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:27:19 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-17R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:00:00 AM

Lab ID: 2203825-003E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0033 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 9:29:12 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:29:12 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:29:12 AM | A86535 |
| Zinc | 0.033 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 9:29:12 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:11:09 PM | A86624 |
| Arsenic | 0.0037 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Barium | 0.45 | 0.0046 | 0.010 | | mg/L | 10 | 3/18/2022 3:47:45 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Chromium | 0.00023 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Lead | 0.00024 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Nickel | 0.0057 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 2:57:02 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:29:27 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1800 | 23 | 100 | | µg/L | 100 | 3/19/2022 4:48:32 AM | R86601 |
| Toluene | 630 | 2.0 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Ethylbenzene | 42 | 2.1 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 110 | 3.9 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,2,4-Trimethylbenzene | 38 | 1.2 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,3,5-Trimethylbenzene | 12 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Chloroform | 1.9 | 1.3 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| cis-1,2-DCE | 4.6 | 3.9 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Isopropylbenzene | 4.4 | 1.8 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 4-Isopropyltoluene | 2.2 | 2.0 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| n-Butylbenzene | 3.5 | 2.5 | 30 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| n-Propylbenzene | 6.6 | 1.8 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| sec-Butylbenzene | 1.7 | 1.4 | 10 | J | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Xylenes, Total | 300 | 3.7 | 15 | | µg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 91.7 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 94.3 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Surr: Dibromofluoromethane | 91.4 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 5:16:54 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 7.2 | 0.12 | 0.50 | | mg/L | 10 | 3/19/2022 5:16:54 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 5:16:54 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 4:51:05 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 4.0 | 0.16 | 0.64 | | mg/L | 10 | 3/21/2022 2:41:08 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 3/21/2022 2:41:08 PM | 66219 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 3/21/2022 2:41:08 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 2,4-Dimethylphenol | 2.7 | 0.97 | 5.0 | J | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 1-Methylnaphthalene | 110 | 0.60 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 2-Methylnaphthalene | 140 | 0.41 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 2-Methylphenol | 4.4 | 0.51 | 5.0 | J | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 3+4-Methylphenol | 3.5 | 0.45 | 5.0 | J | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Naphthalene | ND | 2.2 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Phenol | 12 | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: 2-Fluorophenol | 53.9 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: Phenol-d5 | 39.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 72.1 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: Nitrobenzene-d5 | 62.7 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 61.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 88.5 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 2:07:23 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 9.6 | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Acenaphthene | 7.1 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Fluorene | 8.5 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Phenanthrene | 6.7 | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Anthracene | 0.40 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Pyrene | ND | 0.16 | 0.40 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 3:11:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.1 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 63.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 3:11:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 80.9 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 3:11:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0048 | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Vanadium | 0.010 | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Arsenic | 0.0070 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Barium | 1.7 | 0.023 | 0.050 | | mg/L | 50 | 3/21/2022 2:34:42 PM | 66254 |
| Beryllium | 0.00042 | 0.00025 | 0.0010 | J | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Chromium | 0.0068 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Lead | 0.0043 | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Nickel | 0.010 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Selenium | 0.00087 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| Zinc | 0.0093 | 0.0038 | 0.010 | J | mg/L | 1 | 3/21/2022 1:40:58 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:35:51 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:20:00 AM

Lab ID: 2203825-004E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0032 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 9:32:31 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:32:31 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:32:31 AM | A86535 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 9:32:31 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:19:15 PM | A86624 |
| Arsenic | 0.0056 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Barium | 1.7 | 0.023 | 0.050 | | mg/L | 50 | 3/18/2022 3:50:26 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Chromium | 0.00025 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Nickel | 0.0059 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 2:59:43 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:38:00 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:45:00 AM

Lab ID: 2203825-005A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.49 | 0.23 | 1.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Toluene | 0.80 | 0.20 | 1.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 1.4 | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 0.41 | 0.25 | 1.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Chloromethane | 0.78 | 0.41 | 3.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,1-Dichloroethene | 0.61 | 0.20 | 1.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Trichloroethene (TCE) | 0.57 | 0.20 | 1.0 | J | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 89.2 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Surr: Dibromofluoromethane | 88.4 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 5:45:16 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.047 | 0.012 | 0.050 | J | mg/L | 1 | 3/19/2022 5:45:16 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/19/2022 5:45:16 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:45:00 AM

Lab ID: 2203825-005B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 5:06:09 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:45:00 AM

Lab ID: 2203825-005C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.11 | 0.016 | 0.064 | | mg/L | 1 | 3/18/2022 6:04:37 PM | 66219 |
| Motor Oil Range Organics (MRO) | 0.066 | 0.052 | 0.080 | J | mg/L | 1 | 3/18/2022 6:04:37 PM | 66219 |
| Surr: DNOP | 99.3 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 6:04:37 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: 2-Fluorophenol | 41.5 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: Phenol-d5 | 31.8 | 0 | 28.5-64.7 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 33.8 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: Nitrobenzene-d5 | 54.8 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 54.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 73.6 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 2:48:37 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.6 | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Naphthalene | 0.10 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Pyrene | 0.16 | 0.16 | 0.40 | J | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 3:56:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-38**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/15/2022 10:45:00 AM**Lab ID:** 2203825-005C**Matrix:** Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.7 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 56.3 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 3:56:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 87.1 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 3:56:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:45:00 AM

Lab ID: 2203825-005D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.010 | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Vanadium | 0.030 | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Arsenic | 0.0047 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Barium | 0.71 | 0.0092 | 0.020 | | mg/L | 20 | 3/21/2022 2:37:08 PM | 66254 |
| Beryllium | 0.0011 | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Cadmium | 0.00010 | 0.000080 | 0.00050 | J | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Chromium | 0.014 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Lead | 0.011 | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Nickel | 0.016 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Selenium | 0.0037 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| Zinc | 0.029 | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:43:24 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:40:08 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 10:45:00 AM

Lab ID: 2203825-005E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0038 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 9:35:19 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:35:19 AM | A86535 |
| Vanadium | 0.0041 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 9:35:19 AM | A86535 |
| Zinc | 0.0055 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 9:35:19 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:21:56 PM | A86624 |
| Arsenic | 0.0028 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Barium | 0.061 | 0.0023 | 0.0050 | | mg/L | 5 | 3/18/2022 3:53:07 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Chromium | 0.0047 | 0.00014 | 0.0010 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Lead | 0.000068 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Nickel | 0.0081 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| Selenium | 0.0021 | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 3:02:25 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:42:17 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 500 | 11 | 50 | | µg/L | 50 | 3/21/2022 1:49:08 PM | R86626 |
| Toluene | 6.1 | 1.0 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Ethylbenzene | 47 | 1.1 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 850 | 2.0 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,2,4-Trimethylbenzene | 70 | 0.61 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,3,5-Trimethylbenzene | 8.3 | 0.91 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 2.8 | 1.3 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 1.5 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Chloroform | 2.1 | 0.67 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Chloromethane | 3.9 | 2.1 | 15 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| cis-1,2-DCE | 20 | 1.9 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,1-Dichloroethane | 41 | 1.4 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,1-Dichloroethene | 64 | 1.0 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Isopropylbenzene | 2.3 | 0.91 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 4-Isopropyltoluene | 1.3 | 1.0 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| n-Propylbenzene | 3.1 | 0.91 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Trichloroethene (TCE) | 2.5 | 1.0 | 5.0 | J | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Xylenes, Total | 88 | 1.9 | 7.5 | | µg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 87.6 | 0 | 70-130 | | %Rec | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 99.7 | 0 | 70-130 | | %Rec | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Surr: Dibromofluoromethane | 86.9 | 0 | 70-130 | | %Rec | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 5 | 3/19/2022 6:13:40 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 3.7 | 0.061 | 0.25 | | mg/L | 5 | 3/19/2022 6:13:40 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 5 | 3/19/2022 6:13:40 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 5:21:18 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.5 | 0.016 | 0.064 | | mg/L | 1 | 3/18/2022 6:28:19 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 6:28:19 PM | 66219 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 6:28:19 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Phenol | 5.5 | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: 2-Fluorophenol | 51.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: Phenol-d5 | 38.1 | 0 | 28.5-64.7 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 65.1 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: Nitrobenzene-d5 | 62.6 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 62.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 82.7 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 3:29:59 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 31 | 0.48 | 10 | | µg/L | 10 | 3/22/2022 6:15:00 PM | R86665 |
| Naphthalene | 11 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| 1-Methylnaphthalene | 8.7 | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| 2-Methylnaphthalene | 2.4 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Acenaphthene | 0.86 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Fluorene | 1.1 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Phenanthrene | 0.54 | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Anthracene | 0.26 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Pyrene | 0.22 | 0.16 | 0.40 | J | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 4:41:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.2 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 61.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 4:41:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 82.3 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 4:41:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.010 | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Vanadium | 0.024 | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Arsenic | 0.0045 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Barium | 0.99 | 0.023 | 0.050 | | mg/L | 50 | 3/21/2022 2:39:35 PM | 66254 |
| Beryllium | 0.0016 | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Chromium | 0.015 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Lead | 0.0075 | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Nickel | 0.020 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Selenium | 0.0016 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| Zinc | 0.025 | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:50:45 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:44:26 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-04R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:10:00 AM

Lab ID: 2203825-006E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0056 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 9:43:35 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:43:35 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:43:35 AM | A86535 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 9:43:35 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:24:37 PM | A86624 |
| Arsenic | 0.0026 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Barium | 0.69 | 0.0092 | 0.020 | | mg/L | 20 | 3/18/2022 3:55:48 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Chromium | 0.00026 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Nickel | 0.0089 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 3:05:06 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:46:34 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203825-007A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 5300 | 23 | 100 | | µg/L | 100 | 3/19/2022 6:42:01 AM | R86601 |
| Toluene | 320 | 2.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Ethylbenzene | 450 | 2.1 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 24 | 3.9 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,2,4-Trimethylbenzene | 220 | 1.2 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,3,5-Trimethylbenzene | 46 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 4.3 | 2.5 | 10 | J | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Chloroform | 3.5 | 1.3 | 10 | J | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,1-Dichloroethane | 14 | 2.7 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Isopropylbenzene | 16 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| n-Butylbenzene | 5.3 | 2.5 | 30 | J | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| n-Propylbenzene | 29 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| sec-Butylbenzene | 4.4 | 1.4 | 10 | J | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Vinyl chloride | 16 | 3.2 | 10 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Xylenes, Total | 1300 | 3.7 | 15 | | µg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 88.6 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 97.9 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Surr: Dibromofluoromethane | 85.5 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 7:10:20 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 19 | 0.12 | 0.50 | | mg/L | 10 | 3/19/2022 7:10:20 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 7:10:20 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Lab ID: 2203825-007B

Client Sample ID: MKTF-11

Collection Date: 3/15/2022 11:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 5:36:28 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203825-007C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.92 | 0.016 | 0.064 | | mg/L | 1 | 3/18/2022 6:51:54 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 6:51:54 PM | 66219 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 6:51:54 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 2,4-Dimethylphenol | 4.3 | 0.97 | 5.0 | J | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 2-Methylphenol | 6.4 | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 3+4-Methylphenol | 3.8 | 0.45 | 5.0 | J | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Phenol | 30 | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: 2-Fluorophenol | 32.6 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: Phenol-d5 | 26.9 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 12.6 | 0 | 18.6-129 | S | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: Nitrobenzene-d5 | 44.3 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 40.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 84.9 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 12:28:27 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 5.7 | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Naphthalene | 16 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| 1-Methylnaphthalene | 4.4 | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| 2-Methylnaphthalene | 4.7 | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Acenaphthene | 0.30 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Fluorene | 0.78 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Phenanthrene | 0.26 | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Pyrene | 0.20 | 0.16 | 0.40 | J | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 5:26:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203825-007C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 46.6 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 43.5 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 5:26:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 5:26:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203825-007D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|-----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0039 | 0.00084 | 0.0050 | J | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Vanadium | 0.0049 | 0.0029 | 0.0050 | J | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Arsenic | 0.015 | 0.00063 | 0.0050 | * | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Barium | 4.6 | 0.092 | 0.20 | | mg/L | 200 | 3/21/2022 2:49:22 PM | 66254 |
| Beryllium | ND | 0.0012 | 0.0050 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:53:11 PM | 66254 |
| Chromium | 0.0038 | 0.0028 | 0.0050 | J | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Lead | 0.0020 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Nickel | 0.028 | 0.0024 | 0.0050 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Silver | ND | 0.0011 | 0.0025 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| Zinc | 0.069 | 0.019 | 0.050 | | mg/L | 5 | 3/21/2022 2:42:00 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:48:43 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:30:00 AM

Lab ID: 2203825-007E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|-----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | 0.0058 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 9:48:14 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:48:14 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:48:14 AM | A86535 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 9:48:14 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:27:18 PM | A86624 |
| Arsenic | 0.013 | 0.00012 | 0.0010 | * | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Barium | 4.5 | 0.092 | 0.20 | | mg/L | 200 | 3/18/2022 3:58:29 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Chromium | 0.00045 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Nickel | 0.026 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| Selenium | 0.00046 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/18/2022 3:07:47 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:50:52 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 6300 | 23 | 100 | | µg/L | 100 | 3/19/2022 7:38:39 AM | R86601 |
| Toluene | 220 | 2.0 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Ethylbenzene | 1600 | 21 | 100 | | µg/L | 100 | 3/19/2022 7:38:39 AM | R86601 |
| Methyl tert-butyl ether (MTBE) | 9.6 | 3.9 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,2,4-Trimethylbenzene | 930 | 1.2 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,3,5-Trimethylbenzene | 220 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,2-Dichloroethane (EDC) | 4.1 | 2.5 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,2-Dibromoethane (EDB) | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 2-Butanone | 21 | 20 | 100 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Chloroform | 4.0 | 1.3 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Chloromethane | 27 | 4.1 | 30 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| cis-1,2-DCE | 6.2 | 3.9 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,1-Dichloroethane | 12 | 2.7 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Isopropylbenzene | 58 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 4-Isopropyltoluene | 7.7 | 2.0 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Methylene Chloride | 5.6 | 5.0 | 30 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| n-Butylbenzene | 11 | 2.5 | 30 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| n-Propylbenzene | 100 | 1.8 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| sec-Butylbenzene | 5.7 | 1.4 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Vinyl chloride | 8.0 | 3.2 | 10 | J | µg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Xylenes, Total | 6700 | 37 | 150 | | µg/L | 100 | 3/19/2022 7:38:39 AM | R86601 |
| Surr: 1,2-Dichloroethane-d4 | 85.8 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 91.1 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Surr: Dibromofluoromethane | 84.1 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 8:06:58 AM | R86601 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 41 | 0.12 | 0.50 | | mg/L | 10 | 3/19/2022 8:06:58 AM | R86601 |
| Surr: 4-Bromofluorobenzene | 92.2 | 0 | 70-130 | | %Rec | 10 | 3/19/2022 8:06:58 AM | R86601 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 5:51:32 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.9 | 0.016 | 0.064 | | mg/L | 1 | 3/18/2022 7:15:36 PM | 66219 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/18/2022 7:15:36 PM | 66219 |
| Surr: DNOP | 95.4 | 0 | 42.2-138 | | %Rec | 1 | 3/18/2022 7:15:36 PM | 66219 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 2,4-Dimethylphenol | 16 | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 1-Methylnaphthalene | 43 | 0.60 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 2-Methylnaphthalene | 73 | 0.41 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 2-Methylphenol | 6.1 | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Naphthalene | 120 | 2.2 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Phenol | 22 | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: Phenol-d5 | 24.7 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 1.82 | 0 | 18.6-129 | S | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: Nitrobenzene-d5 | 65.4 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 63.3 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 88.9 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 1:09:39 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.6 | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Acenaphthene | 0.88 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Fluorene | 1.8 | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Phenanthrene | 1.4 | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Pyrene | 0.18 | 0.16 | 0.40 | J | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 6:11:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 66.8 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 60.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 6:11:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 88.1 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 6:11:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|-----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | 0.0050 | 0.00084 | 0.0050 | J | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Vanadium | 0.020 | 0.0029 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:55:37 PM | 66254 |
| Arsenic | 0.0061 | 0.00063 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Barium | 7.9 | 0.23 | 0.50 | | mg/L | 500 | 3/21/2022 2:54:15 PM | 66254 |
| Beryllium | ND | 0.0012 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:55:37 PM | 66254 |
| Chromium | 0.012 | 0.0028 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Lead | 0.0082 | 0.00031 | 0.0025 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Nickel | 0.024 | 0.0024 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:55:37 PM | 66254 |
| Zinc | 0.025 | 0.019 | 0.050 | J | mg/L | 5 | 3/21/2022 2:51:49 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:53:02 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-10

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-008E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|-----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 9:52:44 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:52:44 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 9:52:44 AM | A86535 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 9:52:44 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:35:22 PM | A86624 |
| Arsenic | 0.0038 | 0.00012 | 0.0010 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Barium | 8.7 | 0.23 | 0.50 | | mg/L | 500 | 3/18/2022 4:01:10 PM | B86600 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Chromium | 0.00035 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Nickel | 0.015 | 0.00048 | 0.0010 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/18/2022 3:10:29 PM | B86600 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 4:55:12 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022 11:50:00 AM

Lab ID: 2203825-009A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 2-Butanone | 7.9 | 2.0 | 10 | J | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Chloromethane | 0.89 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,1-Dichloroethene | 0.57 | 0.20 | 1.0 | J | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.5 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Surr: Dibromofluoromethane | 97.7 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:54:49 PM | R86626 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:54:49 PM | R86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 2.3 | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 0.41 | 0.25 | 1.0 | J | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Chloromethane | 0.75 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.1 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Surr: Dibromofluoromethane | 96.8 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:17:46 PM | R86626 |
| Surr: Toluene-d8 | 99.5 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:17:46 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.036 | 0.012 | 0.050 | J | mg/L | 1 | 3/21/2022 2:17:46 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:17:46 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 6:06:41 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.026 | 0.016 | 0.064 | J | mg/L | 1 | 3/22/2022 3:51:22 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 3:51:22 PM | 66236 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 3:51:22 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: 2-Fluorophenol | 32.2 | 0 | 29.4-87.7 | | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: Phenol-d5 | 24.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: 2,4,6-Tribromophenol | 41.9 | 0 | 18.6-129 | | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: Nitrobenzene-d5 | 41.5 | 0 | 36.9-103 | | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: 2-Fluorobiphenyl | 39.6 | 0 | 38.1-99.9 | | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| Surr: 4-Terphenyl-d14 | 84.7 | 0 | 48-155 | | %Rec | 1 | 3/22/2022 5:33:56 PM | 66226 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Pyrene | ND | 0.16 | 0.40 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/21/2022 6:56:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010C

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 46.9 | 0 | 31.6-100 | | %Rec | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Surr: 2-Fluorobiphenyl | 44.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/21/2022 6:56:00 PM | R86628 |
| Surr: 4-Terphenyl-d14 | 95.6 | 0 | 72.3-147 | | %Rec | 1 | 3/21/2022 6:56:00 PM | R86628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010D

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Cobalt | ND | 0.00017 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Vanadium | 0.045 | 0.00058 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Arsenic | 0.00080 | 0.00013 | 0.0010 | J | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Barium | 0.041 | 0.00046 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Beryllium | ND | 0.00025 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Cadmium | ND | 0.000080 | 0.00050 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Chromium | 0.0032 | 0.00056 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Lead | 0.00018 | 0.000061 | 0.00050 | J | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Nickel | 0.0022 | 0.00048 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Selenium | 0.0022 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Silver | ND | 0.00022 | 0.00050 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| Zinc | ND | 0.0038 | 0.010 | | mg/L | 1 | 3/21/2022 1:58:04 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 5:01:38 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-15-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/15/2022

Lab ID: 2203825-010E

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 9:55:35 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 9:55:35 AM | A86535 |
| Vanadium | 0.044 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 9:55:35 AM | A86535 |
| Zinc | 0.0077 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 9:55:35 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Arsenic | 0.00068 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Barium | 0.044 | 0.00046 | 0.0010 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Beryllium | ND | 0.00020 | 0.0010 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Cadmium | ND | 0.000066 | 0.00050 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Chromium | 0.00051 | 0.00014 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Nickel | 0.00062 | 0.00048 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| Selenium | 0.0028 | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 5:40:44 PM | A86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/21/2022 5:08:04 PM | 66284 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203825-011A

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Chloromethane | 0.66 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 92.6 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Surr: Dibromofluoromethane | 95.8 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:46:21 PM | R86626 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:46:21 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.035 | 0.012 | 0.050 | J | mg/L | 1 | 3/21/2022 2:46:21 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 2:46:21 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203825

Date Reported: 3/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203825-011B

Matrix: Groundwater

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 6:21:47 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

March 22, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1472568

Samples Received: 03/17/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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| Sr: Sample Results | 6 |
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2203825-001F EB 3-15-22 L1472568-01 WW

Collected by
Collected date/time
Received date/time

03/15/22 08:30 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:31 | LDT | Mt. Juliet, TN |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2203825-002F OW-1 L1472568-02 WW

Collected by
Collected date/time
Received date/time

03/15/22 09:00 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:33 | LDT | Mt. Juliet, TN |

2203825-003F MKTF-17R L1472568-03 WW

Collected by
Collected date/time
Received date/time

03/15/22 10:00 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:34 | LDT | Mt. Juliet, TN |

2203825-004F MKTF-18R L1472568-04 WW

Collected by
Collected date/time
Received date/time

03/15/22 10:20 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:35 | LDT | Mt. Juliet, TN |

2203825-005F MKTF-38 L1472568-05 WW

Collected by
Collected date/time
Received date/time

03/15/22 10:45 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:38 | LDT | Mt. Juliet, TN |

2203825-006F MKTF-04R L1472568-06 WW

Collected by
Collected date/time
Received date/time

03/15/22 11:10 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:39 | LDT | Mt. Juliet, TN |

2203825-007F MKTF-11 L1472568-07 WW

Collected by
Collected date/time
Received date/time

03/15/22 11:30 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:42 | LDT | Mt. Juliet, TN |

2203825-008F MKTF-10 L1472568-08 WW

Collected by
Collected date/time
Received date/time

03/15/22 11:50 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:43 | LDT | Mt. Juliet, TN |

SAMPLE SUMMARY

2203825-009F DUP-3-15-22 L1472568-09 WW

Collected by
Collected date/time
Received date/time

03/15/22 00:00 03/17/22 10:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1835677 | 1 | 03/21/22 18:09 | 03/22/22 12:44 | LDT | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:31 | WG1835677 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/15/22 09:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:33 | WG1835677 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:34 | WG1835677 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:35 | WG1835677 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 03/15/22 10:45

L1472568

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:38 | WG1835677 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|--------------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 0.00801 | J6 | 0.00500 | 1 | 03/22/2022 12:39 | WG1835677 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:42 | WG1835677 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:43 | WG1835677 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/22/2022 12:44 | WG1835677 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1472568-01,02,03,04,05,06,07,08,09

Method Blank (MB)

(MB) R3772598-1 03/22/22 12:14

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1472100-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1472100-06 03/22/22 12:18 • (DUP) R3772598-3 03/22/22 12:19

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1472568-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1472568-01 03/22/22 12:31 • (DUP) R3772598-6 03/22/22 12:32

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3772598-2 03/22/22 12:15

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1472100-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472100-13 03/22/22 12:20 • (MS) R3772598-4 03/22/22 12:21 • (MSD) R3772598-5 03/22/22 12:22

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0903 | 0.0851 | 90.3 | 85.1 | 1 | 90.0-110 | | J6 | 5.93 | 20 |

L1472568-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472568-06 03/22/22 12:39 • (MS) R3772598-7 03/22/22 12:40 • (MSD) R3772598-8 03/22/22 12:41

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00801 | 0.0912 | 0.0828 | 83.2 | 74.8 | 1 | 90.0-110 | J6 | J6 | 9.66 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

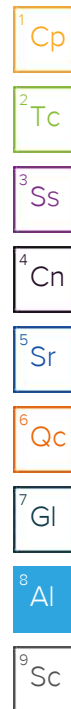
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

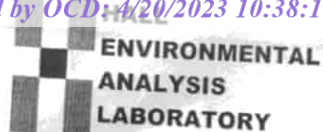
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: clients.hallenvironmental.com

| | | | | | | | | | | | | |
|------------------|--|----------------------|--|---------|---------|-----------|-------|----------------|--|-----|----------------|--|
| SUB CONTRACTOR | | Pace TN | | COMPANY | PACE TN | | PHONE | (800) 767-5859 | | FAX | (615) 758-5859 | |
| ADDRESS | | 12065 Lebanon Rd | | | | ACCOUNT # | | EMAIL | | | | |
| CITY, STATE, ZIP | | Mt. Juliet, TN 37122 | | | | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|---------------------|
| 1 | 2203825-001F | EB 3-15-22 | 500AMBHDP | Groundw | 3/15/2022 8:30:00 AM | 1 | Total Cyanide -01 |
| 2 | 2203825-002F | OW-1 | 500AMBHDP | Groundw | 3/15/2022 9:00:00 AM | 1 | Total Cyanide -02 |
| 3 | 2203825-003F | MKTF-17R | 500AMBHDP | Groundw | 3/15/2022 10:00:00 AM | 1 | Total Cyanide -03 |
| 4 | 2203825-004F | MKTF-18R | 500AMBHDP | Groundw | 3/15/2022 10:20:00 AM | 1 | Total Cyanide -04 |
| 5 | 2203825-005F | MKTF-38 | 500AMBHDP | Groundw | 3/15/2022 10:45:00 AM | 1 | Total Cyanide -05 |
| 6 | 2203825-006F | MKTF-04R | 500AMBHDP | Groundw | 3/15/2022 11:10:00 AM | 1 | Total Cyanide -06 |
| 7 | 2203825-007F | MKTF-11 | 500AMBHDP | Groundw | 3/15/2022 11:30:00 AM | 1 | Total Cyanide -07 |
| 8 | 2203825-008F | MKTF-10 | 500AMBHDP | Groundw | 3/15/2022 11:50:00 AM | 1 | Total Cyanide -08 |
| 9 | 2203825-010F | DUP-3-15-22 | 500AMBHDP | Groundw | 3/15/2022 | 1 | Total Cyanide -09 |

L472568

5528 5947 8329

B039

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

3.0 to = 3.0

3.3 to 3.3 DRA2 Cnt = 9 TB = 0

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-----------------|---------------|----------------------------------|---------------|-------------|---|---|
| Relinquished By: <i>CHE</i> | Date: 3/16/2022 | Time: 8:46 AM | Received By: <i>T. Robertson</i> | Date: 3/15/22 | Time: 10:00 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples ☐ °C Attempt to Cool? ☐ | |
| Comments: | | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A86535 | | RunNo: 86535 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3053829 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A86535 | | RunNo: 86535 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3053831 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.0059 | 0.0060 | 0.006000 | 0 | 98.3 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A86535 | | RunNo: 86535 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3053835 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.1 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203825-001EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB 3-15-22 | Batch ID: A86535 | | RunNo: 86535 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3053845 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0.006303 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203825-001EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB 3-15-22 | Batch ID: A86535 | | RunNo: 86535 | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | | SeqNo: 3053846 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|--------|----------|------|
| Sample ID: 2203825-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB 3-15-22 | | Batch ID: A86535 | | RunNo: 86535 | | | | | | |
| Prep Date: | | Analysis Date: 3/17/2022 | | SeqNo: 3053846 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 70 | 130 | 0.0498 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 70 | 130 | 0.505 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 70 | 130 | 0.869 | 20 | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0.006303 | 102 | 70 | 130 | 0.103 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66254 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 66254 | RunNo: 86616 |
| Prep Date: 3/17/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057671 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |
| Silver | ND | 0.00050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | |
|--------------------------------|---------------------------------|--|
| Sample ID: MSLLCS-66254 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 66254 | RunNo: 86616 |
| Prep Date: 3/17/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057672 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|---------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.3 | 50 | 150 | | | J |
| Barium | 0.0010 | 0.0010 | 0.001000 | 0 | 100 | 50 | 150 | | | |
| Beryllium | 0.0012 | 0.0010 | 0.001000 | 0 | 115 | 50 | 150 | | | |
| Cadmium | 0.00057 | 0.00050 | 0.0005001 | 0 | 113 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005001 | 0 | 98.9 | 50 | 150 | | | J |
| Nickel | 0.00086 | 0.0010 | 0.001000 | 0 | 86.5 | 50 | 150 | | | J |
| Selenium | 0.00089 | 0.0010 | 0.001000 | 0 | 89.2 | 50 | 150 | | | J |
| Silver | 0.00052 | 0.00050 | 0.0005001 | 0 | 104 | 50 | 150 | | | |
| Zinc | 0.0095 | 0.010 | 0.01000 | 0 | 94.7 | 50 | 150 | | | J |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-66254 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 66254 | RunNo: 86616 |
| Prep Date: 3/17/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057673 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.3 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Barium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-66254 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057673 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.25 | 0.010 | 0.2500 | 0 | 99.9 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|--------------|----------------|-----------------------------|-------------|------|----------|------|
| Sample ID: 2203825-001DMSLL | | | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: EB 3-15-22 | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057706 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.024 | 0.0010 | 0.02500 | 0 | 96.1 | 70 | 130 | | | |
| Vanadium | 0.025 | 0.0010 | 0.02500 | 0 | 98.1 | 70 | 130 | | | |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 96.2 | 70 | 130 | | | |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 94.0 | 70 | 130 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.012 | 0.00050 | 0.01250 | 0 | 99.9 | 70 | 130 | | | |
| Chromium | 0.025 | 0.0010 | 0.02500 | 0 | 99.6 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.4 | 70 | 130 | | | |
| Nickel | 0.024 | 0.0010 | 0.02500 | 0 | 95.3 | 70 | 130 | | | |
| Selenium | 0.021 | 0.0010 | 0.02500 | 0 | 83.1 | 70 | 130 | | | |
| Silver | 0.012 | 0.00050 | 0.01250 | 0 | 97.5 | 70 | 130 | | | |
| Zinc | 0.25 | 0.010 | 0.2500 | 0 | 98.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------|----------------|-----------------------------|-------------|------|----------|------|
| Sample ID: 2203825-001DMSDL | | | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: EB 3-15-22 | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057707 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | 3.93 | 20 | |
| Vanadium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 3.54 | 20 | |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | 1.59 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 5.79 | 20 | |
| Barium | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 70 | 130 | 3.51 | 20 | |
| Beryllium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | 4.80 | 22 | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 70 | 130 | 4.72 | 20 | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 2.70 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.9 | 70 | 130 | 4.69 | 20 | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 7.20 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2203825-001DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: EB 3-15-22 | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057707 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 95.6 | 70 | 130 | 14.1 | 20 | |
| Silver | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 70 | 130 | 4.11 | 20 | |
| Zinc | 0.26 | 0.010 | 0.2500 | 0 | 102 | 70 | 130 | 3.55 | 20 | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2203825-002DMSLL SampType: MS TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: OW-1 | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057721 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Vanadium | 0.070 | 0.0050 | 0.02500 | 0.04439 | 102 | 70 | 130 | | | |
| Barium | 0.067 | 0.0050 | 0.02500 | 0.04437 | 91.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|--------------|----------------|-----------------------------|-------------|------|----------|------|
| Sample ID: 2203825-002DMSLL | | | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: OW-1 | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057747 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.025 | 0.0010 | 0.02500 | 0 | 98.8 | 70 | 130 | | | |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0.0006876 | 107 | 70 | 130 | | | |
| Beryllium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |
| Cadmium | 0.011 | 0.00050 | 0.01250 | 0 | 84.6 | 70 | 130 | | | |
| Chromium | 0.030 | 0.0010 | 0.02500 | 0.003087 | 107 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.0001951 | 85.0 | 70 | 130 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0.002052 | 95.5 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0.002696 | 97.6 | 70 | 130 | | | |
| Silver | 0.0099 | 0.00050 | 0.01250 | 0 | 79.2 | 70 | 130 | | | |
| Zinc | 0.24 | 0.010 | 0.2500 | 0 | 94.7 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056942 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|----|---------|--|--|--|--|--|--|--|--|
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056943 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|---------|---------|-----------|---|-----|----|-----|--|--|--|
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Barium | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.00054 | 0.00050 | 0.0005001 | 0 | 108 | 50 | 150 | | | |
| Chromium | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005001 | 0 | 109 | 50 | 150 | | | |
| Nickel | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: B86600 | | RunNo: 86600 | | | | | | |
| Prep Date: | | Analysis Date: 3/18/2022 | | SeqNo: 3056944 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|-------|---------|---------|---|-----|----|-----|--|--|--|
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |
| Chromium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 113 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058028 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Barium | ND | 0.0010 | | | | | | | | |
| Beryllium | ND | 0.0010 | | | | | | | | |
| Cadmium | ND | 0.00050 | | | | | | | | |
| Chromium | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Nickel | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058029 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 115 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Barium | 0.00091 | 0.0010 | 0.001000 | 0 | 91.1 | 50 | 150 | | | J |
| Beryllium | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.00051 | 0.00050 | 0.0005001 | 0 | 103 | 50 | 150 | | | |
| Chromium | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005001 | 0 | 108 | 50 | 150 | | | |
| Nickel | 0.00098 | 0.0010 | 0.001000 | 0 | 98.4 | 50 | 150 | | | J |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.6 | 50 | 150 | | | J |

| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058030 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Barium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Beryllium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Cadmium | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Nickel | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.8 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203825-007EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: MKTF-11 | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058056 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203825-007EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: MKTF-11 | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058057 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 92.5 | 70 | 130 | 14.9 | 20 | |

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203825-008EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: MKTF-10 | | Batch ID: A86624 | | RunNo: 86624 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058059 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66284 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66284 | RunNo: 86625 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3058104 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-66284 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66284 | RunNo: 86625 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3058105 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00016 | 0.00020 0.0001501 0 109 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66284 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66284 | RunNo: 86625 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3058106 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.6 85 115 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2203825-010DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-3-15-22 | Batch ID: 66284 | RunNo: 86625 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3058154 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 | 0.00020 0.005000 0 103 75 125 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2203825-010DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-3-15-22 | Batch ID: 66284 | RunNo: 86625 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3058155 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 | 0.00020 0.005000 0 105 75 125 2.36 20 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057941 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057948 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66256 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057949 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 0.1000 0 98.4 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-66256 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057951 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 0.1000 0 98.3 70 130 0.0963 20 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66219 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66219 | RunNo: 86571 | | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | SeqNo: 3057145 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.018 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.037 | | 0.03750 | | 98.4 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66219 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66219 | RunNo: 86571 | | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | SeqNo: 3057146 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 77.8 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.022 | | 0.01875 | | 116 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66219 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66219 | RunNo: 86571 | | | | | | | | |
| Prep Date: 3/16/2022 | Analysis Date: 3/18/2022 | SeqNo: 3057152 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 70.5 | 31.7 | 75.4 | 9.82 | 20 | |
| Surr: DNOP | 0.019 | | 0.01875 | | 99.4 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66236 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66236 | RunNo: 86643 | | | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059913 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.030 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.039 | | 0.03750 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66236 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66236 | RunNo: 86643 | | | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059915 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 58.7 | 31.7 | 75.4 | 5.39 | 20 | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|-------------|---|--------------------|-----------|------|----------|------|
| Sample ID: LCS-66236 | SampType: LCS | | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | |
| Client ID: LCSW | Batch ID: 66236 | | | | RunNo: 86643 | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | | | | SeqNo: 3059918 | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 62.0 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3056870 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 94.9 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.1 | | 10.00 | | 91.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3056908 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86601 | RunNo: 86601 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3056908 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.1 | | 10.00 | | 91.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.1 | | 10.00 | | 90.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86626 | RunNo: 86626 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058196 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 93.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|--------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86626 | RunNo: 86626 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058226 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86626 | | | RunNo: 86626 | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | | SeqNo: 3058226 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.68 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66226 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66226 | | | RunNo: 86667 | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | | | SeqNo: 3059885 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 89 | | 200.0 | | 44.3 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 68 | | 200.0 | | 33.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 53.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 57 | | 100.0 | | 56.7 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 54.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.3 | 48 | 155 | | | |

| Sample ID: lcs-66226 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66226 | | | RunNo: 86693 | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/23/2022 | | | SeqNo: 3061232 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 43 | 5.0 | 100.0 | 0 | 42.9 | 15 | 87.6 | | | |
| Phenol | 63 | 5.0 | 200.0 | 0 | 31.4 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 82 | | 200.0 | | 41.1 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 64 | | 200.0 | | 31.8 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 60.6 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 56 | | 100.0 | | 55.7 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 51 | | 100.0 | | 51.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 85.7 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: lcsd-66226 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: LCSS02 | Batch ID: 66226 | | | RunNo: 86693 | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/23/2022 | | | SeqNo: 3061233 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 52.0 | 15 | 87.6 | 19.2 | 30.4 | |
| Phenol | 69 | 5.0 | 200.0 | 0 | 34.4 | 16.8 | 70.5 | 8.98 | 37.2 | |
| Surr: 2-Fluorophenol | 90 | | 200.0 | | 45.2 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.6 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.9 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 60.8 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 54.2 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 88.0 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66226 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86628 | RunNo: 86628 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058293 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | 0.22 | 0.40 | | | | | | | | J |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 63 | | 100.0 | | 63.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 84 | | 200.0 | | 42.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 61.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 112 | 72.3 | 147 | | | |

| Sample ID: lcs-66226 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86628 | RunNo: 86628 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058294 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 0.10 | 2.000 | 0 | 34.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 51.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 59.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 87.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.40 | 2.000 | 0 | 84.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.1 | 0.10 | 2.000 | 0 | 105 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 87.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 96.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 115 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 3.5 | | 5.000 | | 69.2 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: lcs-66226 | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: R86628 | | RunNo: 86628 | | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | SeqNo: 3058294 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 6.5 | | 10.00 | | 65.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 3.1 | | 5.000 | | 62.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 6.3 | | 5.000 | | 126 | 72.3 | 147 | | | |

| Sample ID: lcsd-66226 | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: R86628 | | | RunNo: 86628 | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | | SeqNo: 3058295 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 2.90 | 30.1 | |
| Naphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 21.3 | 79.9 | 0 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | 1.90 | 25 | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | 1.94 | 25 | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.2 | 0.10 | 2.000 | 0 | 61.0 | 33.3 | 86 | 3.33 | 26.4 | |
| Phenanthrene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 41.1 | 95.6 | 3.08 | 25.6 | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 88.0 | 52.9 | 123 | 1.14 | 22.8 | |
| Pyrene | 1.7 | 0.40 | 2.000 | 0 | 86.0 | 51 | 113 | 2.35 | 20 | |
| Benz(a)anthracene | 2.0 | 0.10 | 2.000 | 0 | 100 | 51 | 147 | 4.88 | 24.1 | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 86.0 | 55.3 | 115 | 1.16 | 20 | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 44.4 | 136 | 1.05 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 112 | 31.4 | 165 | 2.64 | 21.1 | |
| Surr: Nitrobenzene-d5 | 3.2 | | 5.000 | | 63.2 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 6.0 | | 10.00 | | 60.0 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 2.7 | | 5.000 | | 54.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 6.1 | | 5.000 | | 122 | 72.3 | 147 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: mb-66244 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: PBW | | Batch ID: R86665 | | RunNo: 86665 | | | | | | |
| Prep Date: | | Analysis Date: 3/22/2022 | | SeqNo: 3059830 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------------|--------|---------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: mb-66244 | | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: PBW | | Batch ID: R86665 | | | RunNo: 86665 | | | | | |
| Prep Date: | | Analysis Date: 3/22/2022 | | | SeqNo: 3059830 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 58.9 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 82 | | 200.0 | | 41.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.2 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.0 | 72.3 | 147 | | | |

| Sample ID: lcs-66244-lf | SampType: LCS | | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSW | Batch ID: R86665 | | | RunNo: 86665 | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | | SeqNo: 3059831 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.10 | 2.000 | 0 | 36.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.4 | 0.10 | 2.000 | 0 | 70.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 77.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 88.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.10 | 2.000 | 0 | 100 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 85.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 93 | | 200.0 | | 46.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 66.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 90.6 | 72.3 | 147 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: lcsd-66244-lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|---------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: R86665 | | | RunNo: 86665 | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | | SeqNo: 3059832 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.74 | 0.10 | 2.000 | 0 | 37.0 | 20.2 | 48.4 | 2.74 | 30.1 | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 70.2 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 45.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.3 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 91.3 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203825

28-Mar-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057007 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |

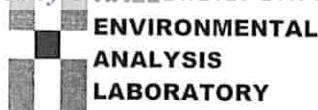
| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R86601 | | RunNo: 86601 | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | | SeqNo: 3057029 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.044 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058229 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058249 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.034 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203825**

RcptNo: 1

Received By: **Cheyenne Cason** 3/16/2022 8:00:00 AMCompleted By: **Cheyenne Cason** 3/16/2022 8:25:20 AMReviewed By: **JR 3/16/22**Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
Cmc 3/16/22
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 18 9
(≤ 2 or > 12 unless noted)

Adjusted? YESChecked by: Cmc 3/16/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: added ~0.5mL HNO₃ to C08D for Ph C2 cmc 3/16/22

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |
| 2 | -0.1 | Good | Yes | | | |
| 3 | 0.8 | Good | Yes | | | |
| 4 | 0.5 | Good | Yes | | | |

**ENVIRONMENTAL
ANALYSIS
LABORATORY**

4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

Sample Log-In Check ListClient Name: **Marathon**Work Order Number: **2203825**RcptNo: **1**

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 0.6 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203920

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 3/17/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 12, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203920
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270:

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 2-Butanone | 8.5 | 2.0 | 10 | J | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Chloromethane | 1.1 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 92.3 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Surr: Dibromofluoromethane | 98.4 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:14:50 PM | R86626 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:14:50 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.036 | 0.012 | 0.050 | J | mg/L | 1 | 3/21/2022 3:14:50 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:14:50 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/21/2022 6:37:00 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 4:15:00 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 4:15:00 PM | 66236 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 4:15:00 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: Phenol-d5 | 36.0 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 64.6 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: Nitrobenzene-d5 | 56.8 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 54.4 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 83.8 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 3:55:03 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 1:01:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.3 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 64.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 1:01:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 105 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 1:01:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 12:36:41 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 2:00:30 PM | 66254 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 2:00:30 PM | 66254 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 2:00:30 PM | 66254 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 2:00:30 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:30:58 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:00:00 AM

Lab ID: 2203920-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| Zinc | 0.0067 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 10:09:34 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:43:26 PM | B86624 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 5:43:26 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 5:43:26 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 5:43:26 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:33:05 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 1.0 | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 0.45 | 0.25 | 1.0 | J | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Chloromethane | 0.75 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,1-Dichloroethane | 0.85 | 0.27 | 1.0 | J | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 96.9 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Surr: Dibromofluoromethane | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:43:27 PM | R86626 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:43:27 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.038 | 0.012 | 0.050 | J | mg/L | 1 | 3/21/2022 3:43:27 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 3:43:27 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/21/2022 6:52:06 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.058 | 0.016 | 0.064 | J | mg/L | 1 | 3/22/2022 4:38:39 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 4:38:39 PM | 66236 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 4:38:39 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: 2-Fluorophenol | 45.7 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: Phenol-d5 | 36.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 52.1 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: Nitrobenzene-d5 | 58.4 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 54.8 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 78.5 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 4:36:18 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 11 | 0.048 | 1.0 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 1:46:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.2 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 66.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 1:46:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 94.4 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 1:46:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.12 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Cobalt | 0.0039 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Nickel | 0.0094 | 0.0033 | 0.010 | J | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Vanadium | 0.016 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| Zinc | 0.0079 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 12:39:55 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 2:56:42 PM | 66254 |
| Arsenic | 0.0013 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/21/2022 2:56:42 PM | 66254 |
| Lead | 0.0024 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/21/2022 2:56:42 PM | 66254 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/21/2022 2:56:42 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000099 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/24/2022 12:35:13 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 8:30:00 AM

Lab ID: 2203920-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.060 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Cobalt | 0.0051 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Nickel | 0.010 | 0.0033 | 0.010 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Vanadium | 0.0084 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 10:11:09 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 6:26:28 PM | B86624 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 3/21/2022 6:26:28 PM | B86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 6:26:28 PM | B86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 6:26:28 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:37:20 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:10:00 AM

Lab ID: 2203920-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.1 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Ethylbenzene | ND | 1.1 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 350 | 2.0 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 12 | 1.3 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Chloromethane | 3.5 | 2.1 | 15 | J | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| cis-1,2-DCE | 3.2 | 1.9 | 5.0 | J | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,1-Dichloroethane | 27 | 1.4 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,1-Dichloroethene | 34 | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| 1,1,1-Trichloroethane | 2.3 | 1.5 | 5.0 | J | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Trichloroethene (TCE) | 5.2 | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 99.0 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Surr: Dibromofluoromethane | 98.6 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 5:09:01 PM | R86626 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 5:09:01 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.55 | 0.061 | 0.25 | | mg/L | 5 | 3/21/2022 5:09:01 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 5:09:01 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:10:00 AM

Lab ID: 2203920-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0093 | | µg/L | 1 | 3/21/2022 7:07:12 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:10:00 AM

Lab ID: 2203920-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.29 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 5:25:58 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 5:25:58 PM | 66236 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 5:25:58 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: 2-Fluorophenol | 40.9 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: Phenol-d5 | 33.4 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 52.8 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: Nitrobenzene-d5 | 49.4 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 49.5 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 71.7 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 5:17:56 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 81 | 0.48 | 10 | | µg/L | 10 | 3/23/2022 10:54:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 2:31:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-31**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/16/2022 9:10:00 AM**Lab ID:** 2203920-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.1 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 59.8 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 2:31:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 87.9 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 2:31:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:10:00 AM

Lab ID: 2203920-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.30 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Chromium | 0.010 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Cobalt | 0.0085 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Nickel | 0.012 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Vanadium | 0.025 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| Zinc | 0.020 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 12:42:48 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 2:05:23 PM | 66254 |
| Arsenic | 0.0021 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 2:05:23 PM | 66254 |
| Lead | 0.0084 | 0.000061 | 0.00050 | | mg/L | 1 | 3/21/2022 2:05:23 PM | 66254 |
| Selenium | 0.0018 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 2:05:23 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 3/24/2022 12:43:43 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:10:00 AM

Lab ID: 2203920-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.12 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Nickel | 0.0066 | 0.0033 | 0.010 | J | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Vanadium | 0.0024 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| Zinc | 0.0082 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 10:14:28 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:54:13 PM | B86624 |
| Arsenic | 0.00059 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:54:13 PM | B86624 |
| Lead | 0.00012 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/21/2022 5:54:13 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 5:54:13 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:45:51 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-25

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:50:00 AM

Lab ID: 2203920-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 96 | 2.3 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Toluene | ND | 2.0 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Ethylbenzene | ND | 2.1 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 180 | 3.9 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 1.2 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 5.8 | 2.5 | 5.0 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Chloromethane | 9.9 | 4.1 | 30 | J | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| cis-1,2-DCE | 8.0 | 3.9 | 10 | J | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,1-Dichloroethane | 51 | 2.7 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,1-Dichloroethene | 9.2 | 2.0 | 10 | J | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Isopropylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| n-Butylbenzene | ND | 2.5 | 30 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| n-Propylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| sec-Butylbenzene | ND | 1.4 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Trichloroethene (TCE) | 5.7 | 2.0 | 10 | J | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Vinyl chloride | 7.1 | 3.2 | 10 | J | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Xylenes, Total | ND | 3.7 | 15 | | µg/L | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 95.9 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 98.1 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 6:34:54 PM | R86626 |
| Surr: Toluene-d8 | 99.0 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 6:34:54 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.97 | 0.12 | 0.50 | | mg/L | 10 | 3/21/2022 6:34:54 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 99.8 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 6:34:54 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-25

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:50:00 AM

Lab ID: 2203920-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 7:22:16 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-25

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:50:00 AM

Lab ID: 2203920-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|---------------------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: SB | | | |
| Diesel Range Organics (DRO) | 0.36 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 5:49:38 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 5:49:38 PM | 66236 |
| Surr: DNOP | 98.5 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 5:49:38 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: DAM | | | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Phenol | 4.1 | 0.33 | 5.0 | J | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: 2-Fluorophenol | 36.7 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: Phenol-d5 | 29.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 60.0 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: Nitrobenzene-d5 | 50.2 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 51.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 70.0 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 5:59:21 PM | 66244 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | 28 | 0.48 | 10 | | µg/L | 10 | 3/23/2022 11:38:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 3:16:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-25**Project:** 2022 GW Sampling 1st Qtr**Collection Date:** 3/16/2022 9:50:00 AM**Lab ID:** 2203920-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.1 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 55.6 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 3:16:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 79.8 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 3:16:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-25

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:50:00 AM

Lab ID: 2203920-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.33 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Chromium | 0.0037 | 0.0021 | 0.0060 | J | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Cobalt | 0.0080 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Nickel | 0.029 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Vanadium | 0.016 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| Zinc | 0.010 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 12:45:34 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 2:07:49 PM | 66254 |
| Arsenic | 0.0031 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/21/2022 3:01:35 PM | 66254 |
| Lead | 0.0055 | 0.00031 | 0.0025 | | mg/L | 5 | 3/21/2022 3:01:35 PM | 66254 |
| Selenium | 0.0023 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/21/2022 3:01:35 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:48:00 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-25

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 9:50:00 AM

Lab ID: 2203920-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.19 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Cobalt | 0.0058 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Nickel | 0.029 | 0.0033 | 0.010 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| Zinc | 0.0054 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 10:38:20 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:56:54 PM | B86624 |
| Arsenic | 0.00079 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:56:54 PM | B86624 |
| Lead | 0.00023 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/21/2022 5:56:54 PM | B86624 |
| Selenium | 0.00041 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:56:54 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:50:09 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 4700 | 23 | 100 | | µg/L | 100 | 3/21/2022 7:03:30 PM | R86626 |
| Toluene | 19 | 2.0 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Ethylbenzene | 250 | 2.1 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 79 | 3.9 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 1.2 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 5.9 | 2.5 | 10 | J | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,1-Dichloroethane | 13 | 2.7 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,1-Dichloroethene | 6.1 | 2.0 | 10 | J | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Isopropylbenzene | 19 | 1.8 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| n-Butylbenzene | 7.7 | 2.5 | 30 | J | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| n-Propylbenzene | 34 | 1.8 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| sec-Butylbenzene | 4.6 | 1.4 | 10 | J | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Trichloroethene (TCE) | 3.2 | 2.0 | 10 | J | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Vinyl chloride | 25 | 3.2 | 10 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Xylenes, Total | ND | 3.7 | 15 | | µg/L | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 95.2 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 97.1 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 7:32:04 PM | R86626 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 7:32:04 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 12 | 0.12 | 0.50 | | mg/L | 10 | 3/21/2022 7:32:04 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 10 | 3/21/2022 7:32:04 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0094 | | µg/L | 1 | 3/21/2022 7:37:25 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.87 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 6:13:15 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 6:13:15 PM | 66236 |
| Surr: DNOP | 105 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 6:13:15 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Phenol | 20 | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: 2-Fluorophenol | 34.5 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: Phenol-d5 | 30.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 52.9 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: Nitrobenzene-d5 | 46.0 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 47.8 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 70.1 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 6:40:50 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 18 | 0.48 | 10 | | µg/L | 10 | 3/24/2022 12:21:00 AM | R86694 |
| Naphthalene | 1.0 | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| 1-Methylnaphthalene | 4.7 | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Acenaphthene | 0.46 | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 4:01:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 71.1 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 64.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 4:01:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 92.2 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 4:01:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|---------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.76 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Cobalt | 0.012 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Nickel | 0.031 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Vanadium | 0.0067 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| Zinc | 0.0076 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 12:48:22 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 2:10:16 PM | 66254 |
| Arsenic | 0.0030 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/21/2022 3:06:29 PM | 66254 |
| Lead | 0.0047 | 0.00031 | 0.0025 | | mg/L | 5 | 3/21/2022 3:06:29 PM | 66254 |
| Selenium | 0.0019 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/21/2022 3:06:29 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 3/24/2022 2:50:47 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-24

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:15:00 AM

Lab ID: 2203920-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.81 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Cobalt | 0.011 | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Nickel | 0.033 | 0.0033 | 0.010 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| Zinc | 0.0088 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 10:41:39 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 5:59:35 PM | B86624 |
| Arsenic | 0.0031 | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 5:59:35 PM | B86624 |
| Lead | 0.00069 | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 5:59:35 PM | B86624 |
| Selenium | 0.00039 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/21/2022 5:59:35 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 12:58:45 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 78 | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 53 | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 57 | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Chloroform | 1.4 | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Chloromethane | 1.9 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| cis-1,2-DCE | 3.6 | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 1,1-Dichloroethane | 100 | 2.7 | 10 | | µg/L | 10 | 3/22/2022 12:49:42 PM | R86666 |
| 1,1-Dichloroethene | 290 | 2.0 | 10 | | µg/L | 10 | 3/22/2022 12:49:42 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Methylene Chloride | 1.1 | 0.50 | 3.0 | J | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Tetrachloroethene (PCE) | 0.36 | 0.36 | 1.0 | J | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| 1,1,1-Trichloroethane | 1.1 | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Trichloroethene (TCE) | 23 | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Vinyl chloride | 0.75 | 0.32 | 1.0 | J | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.5 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Surr: Dibromofluoromethane | 96.2 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 8:00:44 PM | R86626 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 8:00:44 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.63 | 0.012 | 0.050 | | mg/L | 1 | 3/21/2022 8:00:44 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 8:00:44 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|-------|------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | 0.39 | 0.069 | 0.19 | | µg/L | 20 | 3/22/2022 7:34:00 AM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|---------------------|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | Analyst: SB | | |
| Diesel Range Organics (DRO) | 0.24 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 6:36:53 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 6:36:53 PM | 66236 |
| Surr: DNOP | 105 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 6:36:53 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | Analyst: DAM | | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: 2-Fluorophenol | 6.13 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: Phenol-d5 | 19.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 2.36 | 0 | 18.6-129 | S | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: Nitrobenzene-d5 | 48.7 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 46.4 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 80.2 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 7:22:07 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | 110 | 0.48 | 10 | | µg/L | 10 | 3/24/2022 1:05:00 AM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 4:46:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 55.0 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 53.4 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 4:46:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 86.9 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 4:46:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.086 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Cobalt | 0.0060 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Nickel | 0.013 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Vanadium | 0.0075 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| Zinc | 0.011 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 12:58:58 PM | 66642 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/21/2022 3:11:22 PM | 66254 |
| Arsenic | 0.0021 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/21/2022 3:11:22 PM | 66254 |
| Lead | 0.0012 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/21/2022 3:11:22 PM | 66254 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 3/21/2022 3:11:22 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:00:52 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-02R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.048 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Cobalt | 0.0041 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Nickel | 0.014 | 0.0033 | 0.010 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Vanadium | 0.0032 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 3/17/2022 10:44:49 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:02:16 PM | B86624 |
| Arsenic | 0.0018 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/21/2022 6:37:13 PM | B86624 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/21/2022 6:37:13 PM | B86624 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/21/2022 6:37:13 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:03:00 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022 10:40:00 AM

Lab ID: 2203920-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 2-Butanone | 5.7 | 2.0 | 10 | J | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Chloromethane | 0.84 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,1-Dichloroethene | 0.57 | 0.20 | 1.0 | J | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Surr: 1,2-Dichloroethane-d4 | 87.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Surr: Dibromofluoromethane | 96.8 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:18:14 PM | R86666 |
| Surr: Toluene-d8 | 98.6 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:18:14 PM | R86666 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022

Lab ID: 2203920-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1.2 | 1.1 | 5.0 | J | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Ethylbenzene | ND | 1.1 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | 340 | 2.0 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,2-Dichloroethane (EDC) | 12 | 1.3 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Chloromethane | 3.4 | 2.1 | 15 | J | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| cis-1,2-DCE | 3.1 | 1.9 | 5.0 | J | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,1-Dichloroethane | 30 | 1.4 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,1-Dichloroethene | 41 | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| 1,1,1-Trichloroethane | 2.3 | 1.5 | 5.0 | J | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Trichloroethene (TCE) | 5.1 | 1.0 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 8:57:49 PM | R86626 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 8:57:49 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.55 | 0.061 | 0.25 | | mg/L | 5 | 3/21/2022 8:57:49 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 5 | 3/21/2022 8:57:49 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Client Sample ID: DUP-3-16-22
Project: 2022 GW Sampling 1st Qtr Collection Date: 3/16/2022
Lab ID: 2203920-008B Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 8:07:34 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022

Lab ID: 2203920-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.27 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 7:00:26 PM | 66236 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 7:00:26 PM | 66236 |
| Surr: DNOP | 95.6 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 7:00:26 PM | 66236 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: 2-Fluorophenol | 40.0 | 0 | 29.4-87.7 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: Phenol-d5 | 31.9 | 0 | 28.5-64.7 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: 2,4,6-Tribromophenol | 56.7 | 0 | 18.6-129 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: Nitrobenzene-d5 | 49.1 | 0 | 36.9-103 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: 2-Fluorobiphenyl | 52.5 | 0 | 38.1-99.9 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| Surr: 4-Terphenyl-d14 | 70.6 | 0 | 48-155 | | %Rec | 1 | 3/23/2022 8:54:17 PM | 66244 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 63 | 0.48 | 10 | | µg/L | 10 | 3/24/2022 1:48:00 AM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/22/2022 5:31:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022

Lab ID: 2203920-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.6 | 0 | 31.6-100 | | %Rec | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Surr: 2-Fluorobiphenyl | 62.7 | 0 | 26.7-90.1 | | %Rec | 1 | 3/22/2022 5:31:00 PM | R86665 |
| Surr: 4-Terphenyl-d14 | 85.6 | 0 | 72.3-147 | | %Rec | 1 | 3/22/2022 5:31:00 PM | R86665 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022

Lab ID: 2203920-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.34 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Chromium | 0.0091 | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Cobalt | 0.0075 | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Nickel | 0.012 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Vanadium | 0.026 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| Zinc | 0.022 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:01:46 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 2:20:03 PM | 66254 |
| Arsenic | 0.0023 | 0.00013 | 0.0010 | | mg/L | 1 | 3/21/2022 2:20:03 PM | 66254 |
| Lead | 0.0095 | 0.00031 | 0.0025 | | mg/L | 5 | 3/21/2022 3:18:43 PM | 66254 |
| Selenium | 0.0019 | 0.00037 | 0.0010 | | mg/L | 1 | 3/21/2022 2:20:03 PM | 66254 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:09:23 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-16-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/16/2022

Lab ID: 2203920-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.12 | 0.0011 | 0.0020 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Nickel | 0.0051 | 0.0033 | 0.010 | J | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Vanadium | 0.0022 | 0.0017 | 0.050 | J | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| Zinc | 0.0096 | 0.0032 | 0.010 | J | mg/L | 1 | 3/17/2022 10:48:08 AM | A86535 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:04:58 PM | B86624 |
| Arsenic | 0.00049 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 6:04:58 PM | B86624 |
| Lead | 0.00015 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/21/2022 6:04:58 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 6:04:58 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:11:31 PM | 66370 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203920-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Chloromethane | 0.69 | 0.41 | 3.0 | J | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,1-Dichloroethene | 0.68 | 0.20 | 1.0 | J | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 96.8 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 98.0 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:26:16 PM | R86626 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 9:26:16 PM | R86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203920

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203920-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 8:22:40 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

April 01, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1473076

Samples Received: 03/18/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 22039020-001F EB 3-16-22 L1473076-01 | 5 | |
| 2203920-002F MKTF-40 L1473076-02 | 6 | <div><div>4</div>Cn</div> |
| 2203920-003F MKTF-31 L1473076-03 | 7 | <div><div>5</div>Sr</div> |
| 2203920-004F MKTF-25 L1473076-04 | 8 | |
| 2203920-005F MKTF-24 L1473076-05 | 9 | <div><div>6</div>Qc</div> |
| 2203920-006F MKTF-02R L1473076-06 | 10 | |
| 2203920-008F DUP-3-16-22 L1473076-07 | 11 | <div><div>7</div>Gl</div> |
| Qc: Quality Control Summary | 12 | <div><div>8</div>Al</div> |
| Wet Chemistry by Method 4500CN E-2016 | 12 | |
| Gl: Glossary of Terms | 15 | <div><div>9</div>Sc</div> |
| Al: Accreditations & Locations | 16 | |
| Sc: Sample Chain of Custody | 17 | |

22039020-001F EB 3-16-22 L1473076-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1838528 | 1 | 03/27/22 12:37 | 03/31/22 17:03 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2203920-002F MKTF-40 L1473076-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1838528 | 1 | 03/27/22 12:37 | 03/31/22 17:04 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203920-003F MKTF-31 L1473076-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1838528 | 1 | 03/27/22 12:37 | 03/31/22 17:06 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203920-004F MKTF-25 L1473076-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1837590 | 1 | 03/27/22 23:48 | 03/31/22 17:35 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203920-005F MKTF-24 L1473076-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836404 | 1 | 03/22/22 19:57 | 03/25/22 15:09 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203920-006F MKTF-02R L1473076-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836404 | 1 | 03/22/22 19:57 | 03/25/22 15:11 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203920-008F DUP-3-16-22 L1473076-07 WW

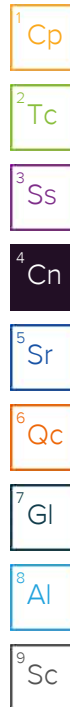
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836404 | 1 | 03/22/22 19:57 | 03/25/22 15:14 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/31/2022 17:03 | WG1838528 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 03/16/22 08:30

L1473076

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00839 | | 0.00500 | 1 | 03/31/2022 17:04 | WG1838528 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|-----------|
| Cyanide | 0.00964 | P1 | 0.00500 | 1 | 03/31/2022 17:06 | WG1838528 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00896 | | 0.00500 | 1 | 03/31/2022 17:35 | WG1837590 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | P1 | 0.00500 | 1 | 03/25/2022 15:09 | WG1836404 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 0.0129 | J3 J6 | 0.00500 | 1 | 03/25/2022 15:11 | WG1836404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/25/2022 15:14 | WG1836404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1473076-05,06,07

Method Blank (MB)

(MB) R3774273-1 03/25/22 14:53

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1472882-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1472882-02 03/25/22 15:06 • (DUP) R3774273-5 03/25/22 15:07

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1473076-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1473076-05 03/25/22 15:09 • (DUP) R3774273-6 03/25/22 15:10

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3774273-2 03/25/22 14:54

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1472837-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472837-02 03/25/22 15:01 • (MS) R3774273-3 03/25/22 15:02 • (MSD) R3774273-4 03/25/22 15:05

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0902 | 0.0642 | 90.2 | 64.2 | 1 | 90.0-110 | | J3 J6 | 33.7 | 20 |

L1473076-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473076-06 03/25/22 15:11 • (MS) R3774273-7 03/25/22 15:12 • (MSD) R3774273-8 03/25/22 15:13

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.0129 | 0.0921 | 0.116 | 79.2 | 103 | 1 | 90.0-110 | J6 | J3 | 23.0 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3776429-1 03/31/22 17:30

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1473076-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1473076-04 03/31/22 17:35 • (DUP) R3776429-3 03/31/22 17:36

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.00896 | 0.00951 | 1 | 5.96 | | 20 |

L1474198-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1474198-07 03/31/22 17:43 • (DUP) R3776429-6 03/31/22 17:44

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3776429-2 03/31/22 17:31

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0998 | 99.8 | 87.1-120 | |

L1473759-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473759-02 03/31/22 17:37 • (MS) R3776429-4 03/31/22 17:38 • (MSD) R3776429-5 03/31/22 17:39

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0978 | 0.0991 | 95.4 | 96.7 | 1 | 90.0-110 | | | 1.32 | 20 |

L1474337-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1474337-01 03/31/22 17:48 • (MS) R3776429-7 03/31/22 17:49 • (MSD) R3776429-8 03/31/22 17:50

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0493 | 0.0546 | 49.3 | 54.6 | 1 | 90.0-110 | J6 | J6 | 10.2 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3776292-1 03/31/22 16:33

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1472759-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1472759-02 03/31/22 16:45 • (DUP) R3776292-5 03/31/22 16:46

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1473076-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1473076-03 03/31/22 17:06 • (DUP) R3776292-8 03/31/22 17:07

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.00964 | 0.00693 | 1 | 32.7 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3776292-2 03/31/22 16:34

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0991 | 99.1 | 87.1-120 | |

L1472743-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472743-04 03/31/22 16:38 • (MS) R3776292-3 03/31/22 16:39 • (MSD) R3776292-4 03/31/22 16:40

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0652 | 0.0977 | 65.2 | 97.7 | 1 | 90.0-110 | J6 | J3 | 39.9 | 20 |

L1472879-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1472879-02 03/31/22 16:53 • (MS) R3776292-6 03/31/22 16:54 • (MSD) R3776292-7 03/31/22 16:57

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0878 | 0.0826 | 87.8 | 82.6 | 1 | 90.0-110 | J6 | J6 | 6.10 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

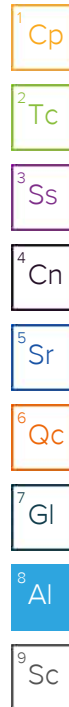
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

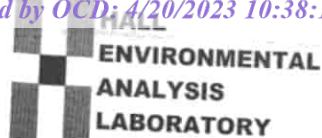
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory

E069

01 Hawkins NE

que, NM 87109

TEL: 505-345-3975

FAX: 505-345-4107

Website: clients.hallenvironmental.com

| | | | | | | | | | | | | | | | |
|------------------|--|----------------------|--|-----------|--|---------|--|-------|--|----------------|--|-----|--|----------------|--|
| SUB CONTRACTOR | | Pace TN | | COMPANY | | PACE TN | | PHONE | | (800) 767-5859 | | FAX | | (615) 758-5859 | |
| ADDRESS | | 12065 Lebanon Rd | | ACCOUNT # | | | | EMAIL | | | | | | | |
| CITY, STATE, ZIP | | Mt. Juliet, TN 37122 | | | | | | | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|---------------------|
| 1 | 2203920-001F | EB 3-16-22 | 500AMBHDP | Groundw | 3/16/2022 8:00:00 AM | 1 | Total Cyanide -01 |
| 2 | 2203920-002F | MKTF-40 | 500AMBHDP | Groundw | 3/16/2022 8:30:00 AM | 1 | Total Cyanide -02 |
| 3 | 2203920-003F | MKTF-31 | 500AMBHDP | Groundw | 3/16/2022 9:10:00 AM | 1 | Total Cyanide -03 |
| 4 | 2203920-004F | MKTF-25 | 500AMBHDP | Groundw | 3/16/2022 9:50:00 AM | 1 | Total Cyanide -04 |
| 5 | 2203920-005F | MKTF-24 | 500AMBHDP | Groundw | 3/16/2022 10:15:00 AM | 1 | Total Cyanide -05 |
| 6 | 2203920-006F | MKTF-02R | 500AMBHDP | Groundw | 3/16/2022 10:40:00 AM | 1 | Total Cyanide -06 |
| 7 | 2203920-008F | DUP-3-16-22 | 500AMBHDP | Groundw | 3/16/2022 | 1 | Total Cyanide -07 |

L1473076

DRA2.6+0=.6

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Fed ex 5528 5947 9444

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|-----------------|-----------|---------|------------------|---------|------|--|---|
| Relinquished By | Date | Time | Received By | Date | Time | REPORT TRANSMITTAL DESIRED: | |
| CMC | 3/17/2022 | 8:05 AM | Veronica Sistner | 3/18/22 | 0900 | ☐ HARDCOPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| Relinquished By | Date | Time | Received By | Date | Time | FOR LAB USE ONLY | |
| | | | | | | Temp of samples | C Attempt to Cool ? |
| Relinquished By | Date | Time | Received By | Date | Time | Comments | |
| | | | | | | | |

TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053828 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053830 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0030 | 0.002000 | 0 | 82.9 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 108 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 97.4 | 50 | 150 | | | J |
| Chromium | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Cobalt | 0.0059 | 0.0060 | 0.006000 | 0 | 98.3 | 50 | 150 | | | J |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.0 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 117 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053834 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.1 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-66642 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 66642 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075584 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LLCS-66642 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 66642 | | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | | | SeqNo: 3075585 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0030 | 0.002000 | 0 | 88.4 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.0 | 50 | 150 | | | J |
| Cadmium | 0.0016 | 0.0020 | 0.002000 | 0 | 78.0 | 50 | 150 | | | J |
| Chromium | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 67.7 | 50 | 150 | | | J |
| Silver | 0.0044 | 0.0050 | 0.005000 | 0 | 88.7 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 107 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-66642 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 66642 | | | RunNo: 87030 | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | | SeqNo: 3075586 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.3 | 85 | 115 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.3 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66643 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075587 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-66643 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075588 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.8 | 50 | 150 | | | J |
| Chromium | 0.0056 | 0.0060 | 0.006000 | 0 | 92.5 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 69.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.5 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 99.8 | 50 | 150 | | | J |

| Sample ID: LCS-66643 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075589 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.4 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053829 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053831 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0020 | 0.002000 | 0 | 82.9 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 108 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 97.4 | 50 | 150 | | | J |
| Chromium | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Cobalt | 0.0059 | 0.0060 | 0.006000 | 0 | 98.3 | 50 | 150 | | | J |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.0 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 117 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A86535 | RunNo: 86535 | | | | | | | | |
| Prep Date: | Analysis Date: 3/17/2022 | SeqNo: 3053835 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.1 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-66254 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 66254 | | RunNo: 86616 | | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3057671 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLLCS-66254 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 66254 | | RunNo: 86616 | | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | SeqNo: 3057672 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.3 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.9 | 50 | 150 | | | J |
| Selenium | 0.00089 | 0.0010 | 0.001000 | 0 | 89.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-66254 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 66254 | | | RunNo: 86616 | | | | | |
| Prep Date: 3/17/2022 | | Analysis Date: 3/21/2022 | | | SeqNo: 3057673 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.3 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058031 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058032 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058033 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 85 | 115 | | | |
| Lead | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66370 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66370 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061890 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-66370 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66370 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061891 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00017 0.00020 0.0001500 | 0 114 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66370 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66370 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061892 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 98.6 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2203920-005DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: MKTF-24 | Batch ID: 66370 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061940 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0050 0.0010 0.005000 | 0 99.0 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2203920-005DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: MKTF-24 | Batch ID: 66370 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061941 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0055 0.0010 0.005000 | 0 110 75 125 10.2 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057941 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057948 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-66256 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 66256 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057949 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|--------|----------|------|
| Sample ID: LCSD-66256 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66256 | RunNo: 86618 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057951 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.3 | 70 | 130 | 0.0963 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-66236 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 66236 | RunNo: 86643 | | | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059913 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.030 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.039 | | 0.03750 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-66236 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66236 | RunNo: 86643 | | | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059915 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 58.7 | 31.7 | 75.4 | 5.39 | 20 | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-66236 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 66236 | RunNo: 86643 | | | | | | | | |
| Prep Date: 3/17/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059918 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 62.0 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 100ng lcs | | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: LCSW | | Batch ID: R86626 | | | RunNo: 86626 | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | | SeqNo: 3058196 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 93.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 2203920-002ams | | SampType: MS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: MKTF-40 | | Batch ID: R86626 | | | RunNo: 86626 | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | | SeqNo: 3058206 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 94.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|-------|----------|------|
| Sample ID: 2203920-002amsd | | SampType: MSD | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: MKTF-40 | | Batch ID: R86626 | | | RunNo: 86626 | | | | | |
| Prep Date: | | Analysis Date: 3/21/2022 | | | SeqNo: 3058207 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | 2.81 | 20 | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | 0.522 | 20 | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | 0.815 | 20 | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 99.5 | 70 | 130 | 2.52 | 20 | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 91.4 | 70 | 130 | 3.52 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.2 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.6 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.8 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86626 | | | RunNo: 86626 | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | | SeqNo: 3058226 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.68 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86666 | RunNo: 86666 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3059842 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 91.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|--------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86666 | RunNo: 86666 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3059870 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.66 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86666 | | | RunNo: 86666 | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | | SeqNo: 3059870 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 92.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66244 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSW | Batch ID: 66244 | RunNo: 86693 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061236 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 48 | 5.0 | 100.0 | 0 | 48.0 | 15 | 87.6 | | | |
| Phenol | 65 | 5.0 | 200.0 | 0 | 32.4 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 85 | | 200.0 | | 42.3 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 65 | | 200.0 | | 32.7 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.9 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 57 | | 100.0 | | 56.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 50.1 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.4 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66244 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66244 | RunNo: 86693 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061237 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 40 | 5.0 | 100.0 | 0 | 40.1 | 15 | 87.6 | 17.9 | 30.4 | |
| Phenol | 56 | 5.0 | 200.0 | 0 | 27.9 | 16.8 | 70.5 | 14.7 | 37.2 | |
| Surr: 2-Fluorophenol | 73 | | 200.0 | | 36.7 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 58 | | 200.0 | | 29.1 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 54.9 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 48 | | 100.0 | | 47.6 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 47 | | 100.0 | | 46.6 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 94.7 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66244 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: PBW | Batch ID: 66244 | RunNo: 86693 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061238 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Phenol | ND | 5.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66244 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66244 | RunNo: 86693 | | | | | | | | |
| Prep Date: 3/18/2022 | Analysis Date: 3/23/2022 | SeqNo: 3061238 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 81 | | 200.0 | | 40.5 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 63 | | 200.0 | | 31.7 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.5 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 50.0 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 49.5 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 82 | | 100.0 | | 81.8 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66244 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86665 | RunNo: 86665 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3059830 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 58.9 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 82 | | 200.0 | | 41.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.2 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.0 | 72.3 | 147 | | | |

| Sample ID: lcs-66244-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86665 | RunNo: 86665 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3059831 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.10 | 2.000 | 0 | 36.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 57.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.2 | 0.10 | 2.000 | 0 | 58.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 56.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.4 | 0.10 | 2.000 | 0 | 70.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 77.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 88.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 83.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.10 | 2.000 | 0 | 100 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 85.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.8 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66244-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R86665 | | RunNo: 86665 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059831 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 93 | | 200.0 | | 46.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 66.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 90.6 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66244-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R86665 | | RunNo: 86665 | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | | SeqNo: 3059832 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.74 | 0.10 | 2.000 | 0 | 37.0 | 20.2 | 48.4 | 2.74 | 30.1 | |
| Naphthalene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 21.3 | 79.9 | 11.6 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.10 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 9.84 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.10 | 2.000 | 0 | 63.0 | 20.6 | 80.1 | 11.8 | 25 | |
| Acenaphthene | 1.4 | 0.10 | 2.000 | 0 | 69.0 | 29.8 | 82.7 | 4.44 | 27.8 | |
| Fluorene | 1.4 | 0.10 | 2.000 | 0 | 70.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.5 | 0.10 | 2.000 | 0 | 73.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 41.1 | 95.6 | 3.97 | 25.6 | |
| Fluoranthene | 1.6 | 0.20 | 2.000 | 0 | 81.0 | 52.9 | 123 | 8.28 | 22.8 | |
| Pyrene | 1.6 | 0.20 | 2.000 | 0 | 79.0 | 51 | 113 | 4.94 | 20 | |
| Benz(a)anthracene | 1.9 | 0.10 | 2.000 | 0 | 94.0 | 51 | 147 | 6.19 | 24.1 | |
| Chrysene | 1.7 | 0.10 | 2.000 | 0 | 84.0 | 55.3 | 115 | 1.18 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.10 | 2.000 | 0 | 90.0 | 44.4 | 136 | 5.41 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 108 | 31.4 | 165 | 1.83 | 21.1 | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 70.2 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 45.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.3 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 91.3 | 72.3 | 147 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66282 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: R86694 | | RunNo: 86694 | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | | SeqNo: 3061263 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 61.1 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 85 | | 200.0 | | 42.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 57.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.4 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66282-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R86694 | | RunNo: 86694 | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | | SeqNo: 3061264 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.10 | 2.000 | 0 | 36.0 | 20.2 | 48.4 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.0 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66282-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R86694 | | RunNo: 86694 | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | | SeqNo: 3061265 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 2.82 | 30.1 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.5 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.6 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.6 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203920

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058229 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203920-003ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-31 | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058236 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 2.7 | 0.25 | 2.500 | 0.5520 | 87.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 53 | | 50.00 | | 106 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2203920-003amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-31 | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058237 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 3.6 | 0.25 | 2.500 | 0.5520 | 121 | 70 | 130 | 26.9 | 20 | R |
| Surr: 4-Bromofluorobenzene | 51 | | 50.00 | | 103 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058249 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.034 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2203920

RcptNo: 1

Received By: Cheyenne Cason 3/17/2022 7:00:00 AM

Completed By: Cheyenne Cason 3/17/2022 7:53:15 AM

Reviewed By: *see 3/17/22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

Adjusted?

Checked by:

14 7
2 or >12 unless notedLabeled by: *one 3/17/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.9 | Good | Yes | | | |
| 2 | 3.9 | Good | Yes | | | |
| 3 | 0.2 | Good | Yes | | | |
| 4 | 1.3 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 22, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 1st Qtr

OrderNo.: 2203989

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 3/18/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued April 12, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2203989
Date: 4/22/2022

CLIENT: Marathon

Project: 2022 GW Sampling 1st Qtr

Analytical Notes Regarding EPA Method 8270:

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

Naphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample MKTF-01R

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:00:00 AM

Lab ID: 2203989-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 2-Butanone | 5.3 | 2.0 | 10 | J | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,1-Dichloroethene | 0.54 | 0.20 | 1.0 | J | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 97.5 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Surr: 4-Bromofluorobenzene | 99.7 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Surr: Dibromofluoromethane | 98.8 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 10:23:20 PM | R86626 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 10:23:20 PM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.037 | 0.012 | 0.050 | J | mg/L | 1 | 3/21/2022 10:23:20 PM | G86626 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/21/2022 10:23:20 PM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Client Sample ID: EB 3-17-22
Project: 2022 GW Sampling 1st Qtr Collection Date: 3/17/2022 8:00:00 AM
Lab ID: 2203989-001B Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 8:37:48 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:00:00 AM

Lab ID: 2203989-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.021 | 0.016 | 0.064 | J | mg/L | 1 | 3/22/2022 7:24:04 PM | 66267 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 7:24:04 PM | 66267 |
| Surr: DNOP | 107 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 7:24:04 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: 2-Fluorophenol | 44.0 | 0 | 29.4-87.7 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: Phenol-d5 | 33.2 | 0 | 28.5-64.7 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: 2,4,6-Tribromophenol | 55.8 | 0 | 18.6-129 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: Nitrobenzene-d5 | 50.4 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: 2-Fluorobiphenyl | 52.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| Surr: 4-Terphenyl-d14 | 81.5 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 11:26:36 AM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 1:47:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:00:00 AM

Lab ID: 2203989-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.5 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 65.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 1:47:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 107 | 0 | 72.3-147 | E | %Rec | 1 | 3/23/2022 1:47:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:00:00 AM

Lab ID: 2203989-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Vanadium | ND | 0.0024 | 0.050 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:04:30 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 11:48:58 AM | 66341 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 11:48:58 AM | 66341 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 3/23/2022 11:48:58 AM | 66341 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 3/23/2022 11:48:58 AM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:13:38 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:00:00 AM

Lab ID: 2203989-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| Zinc | 0.0044 | 0.0032 | 0.010 | J | mg/L | 1 | 3/18/2022 11:18:56 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:07:39 PM | B86624 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 6:07:39 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 6:07:39 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 6:07:39 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:15:46 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 6200 | 23 | 100 | | µg/L | 100 | 3/22/2022 12:45:46 AM | R86626 |
| Toluene | 340 | 2.0 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Ethylbenzene | 580 | 2.1 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 110 | 3.9 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,2,4-Trimethylbenzene | 350 | 1.2 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,3,5-Trimethylbenzene | 16 | 1.8 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,2-Dichloroethane (EDC) | 5.1 | 2.5 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Chloroform | 5.7 | 1.3 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,1-Dichloroethane | 5.5 | 2.7 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Isopropylbenzene | 28 | 1.8 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 4-Isopropyltoluene | 2.7 | 2.0 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| n-Butylbenzene | 11 | 2.5 | 30 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| n-Propylbenzene | 68 | 1.8 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| sec-Butylbenzene | 4.2 | 1.4 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Trichloroethene (TCE) | 3.0 | 2.0 | 10 | J | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Vinyl chloride | 34 | 3.2 | 10 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Xylenes, Total | 820 | 3.7 | 15 | | µg/L | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 89.9 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 95.5 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Surr: Dibromofluoromethane | 92.8 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 1:14:14 AM | R86626 |
| Surr: Toluene-d8 | 97.1 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 1:14:14 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 21 | 0.12 | 0.50 | | mg/L | 10 | 3/22/2022 1:14:14 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 96.7 | 0 | 70-130 | | %Rec | 10 | 3/22/2022 1:14:14 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 8:52:49 PM | 66256 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|---------------------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: SB | | | |
| Diesel Range Organics (DRO) | 1.3 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 7:47:50 PM | 66267 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 7:47:50 PM | 66267 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 7:47:50 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: DAM | | | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 2,4-Dimethylphenol | 4.0 | 0.97 | 5.0 | J | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 2-Methylphenol | 3.7 | 0.51 | 5.0 | J | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Naphthalene | 24 | 2.2 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Phenol | 26 | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: 2-Fluorophenol | 41.0 | 0 | 29.4-87.7 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: Phenol-d5 | 33.0 | 0 | 28.5-64.7 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 47.9 | 0 | 18.6-129 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: Nitrobenzene-d5 | 50.7 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 51.1 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 71.4 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 12:08:15 PM | 66282 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | 14 | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| 1-Methylnaphthalene | 14 | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| 2-Methylnaphthalene | 9.6 | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Acenaphthene | 0.40 | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Fluorene | 0.56 | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Phenanthrene | 0.18 | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 2:32:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.8 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 57.1 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 2:32:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 81.6 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 2:32:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.1 | 0.016 | 0.030 | * | mg/L | 10 | 4/6/2022 1:21:06 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Cobalt | 0.0053 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Nickel | 0.024 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Vanadium | 0.0054 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| Zinc | 0.011 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:07:42 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 11:56:17 AM | 66341 |
| Arsenic | 0.0054 | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 11:56:17 AM | 66341 |
| Lead | 0.0021 | 0.000061 | 0.00050 | | mg/L | 1 | 3/23/2022 11:56:17 AM | 66341 |
| Selenium | 0.00075 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/23/2022 11:56:17 AM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:17:54 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-01R

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 8:46:00 AM

Lab ID: 2203989-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 5.6 | 0.011 | 0.020 | * | mg/L | 10 | 4/19/2022 12:08:37 PM | A87332 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Cobalt | 0.0030 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Nickel | 0.027 | 0.0033 | 0.010 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| Zinc | 0.0077 | 0.0032 | 0.010 | J | mg/L | 1 | 3/18/2022 11:23:23 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:10:20 PM | B86624 |
| Arsenic | 0.0047 | 0.00012 | 0.0010 | | mg/L | 1 | 3/21/2022 6:10:20 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 6:10:20 PM | B86624 |
| Selenium | 0.00038 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/21/2022 6:10:20 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:20:03 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1.3 | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 17 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,2-Dichloroethane (EDC) | 0.54 | 0.25 | 1.0 | J | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Chloromethane | 0.72 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,1-Dichloroethane | 0.86 | 0.27 | 1.0 | J | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Vinyl chloride | 0.46 | 0.32 | 1.0 | J | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 94.6 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Surr: Dibromofluoromethane | 93.8 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:42:39 AM | R86626 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:42:39 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.054 | 0.012 | 0.050 | | mg/L | 1 | 3/22/2022 1:42:39 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 1:42:39 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 9:07:52 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.36 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 8:11:22 PM | 66267 |
| Motor Oil Range Organics (MRO) | 0.16 | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 8:11:22 PM | 66267 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 8:11:22 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: 2-Fluorophenol | 5.18 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: Phenol-d5 | 10.6 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 2.12 | 0 | 18.6-129 | S | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: Nitrobenzene-d5 | 48.5 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 48.5 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 70.0 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 12:50:02 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.3 | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 3:16:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.8 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 60.8 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 3:16:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 82.5 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 3:16:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.073 | 0.0082 | 0.015 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Cadmium | ND | 0.0074 | 0.010 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Chromium | ND | 0.011 | 0.030 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Cobalt | 0.015 | 0.012 | 0.030 | J | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Nickel | 0.021 | 0.016 | 0.050 | J | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Vanadium | ND | 0.012 | 0.25 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| Zinc | ND | 0.032 | 0.050 | | mg/L | 5 | 4/6/2022 1:26:45 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/23/2022 12:08:30 PM | 66341 |
| Arsenic | 0.0015 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:08:30 PM | 66341 |
| Lead | 0.00093 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/23/2022 12:08:30 PM | 66341 |
| Selenium | 0.0062 | 0.0019 | 0.0050 | | mg/L | 5 | 3/23/2022 12:08:30 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:22:12 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:05:00 AM

Lab ID: 2203989-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.068 | 0.0056 | 0.010 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Nickel | 0.033 | 0.016 | 0.050 | J | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Vanadium | ND | 0.0086 | 0.25 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 3/18/2022 11:27:53 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/22/2022 11:58:10 AM | A86633 |
| Arsenic | 0.0011 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/22/2022 11:58:10 AM | A86633 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/22/2022 11:58:10 AM | A86633 |
| Selenium | 0.0047 | 0.0017 | 0.0050 | J | mg/L | 5 | 3/22/2022 11:58:10 AM | A86633 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:24:22 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.30 | 0.23 | 1.0 | J | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 0.53 | 0.39 | 1.0 | J | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,2-Dichloroethane (EDC) | 0.42 | 0.25 | 1.0 | J | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Chloromethane | 0.70 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.8 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 98.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Surr: Dibromofluoromethane | 98.6 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:11:04 AM | R86626 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:11:04 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.039 | 0.012 | 0.050 | J | mg/L | 1 | 3/22/2022 2:11:04 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:11:04 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 9:22:55 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.17 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 8:34:59 PM | 66267 |
| Motor Oil Range Organics (MRO) | 0.056 | 0.052 | 0.080 | J | mg/L | 1 | 3/22/2022 8:34:59 PM | 66267 |
| Surr: DNOP | 88.6 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 8:34:59 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: 2-Fluorophenol | 42.8 | 0 | 29.4-87.7 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: Phenol-d5 | 32.9 | 0 | 28.5-64.7 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 54.4 | 0 | 18.6-129 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: Nitrobenzene-d5 | 54.2 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 53.3 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 69.7 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 1:31:59 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 4:01:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 66.4 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 65.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 4:01:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 82.6 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 4:01:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.17 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Cobalt | 0.0057 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Nickel | 0.0067 | 0.0033 | 0.010 | J | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Vanadium | 0.012 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| Zinc | 0.016 | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:37:22 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 12:10:57 PM | 66341 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 12:10:57 PM | 66341 |
| Lead | 0.0046 | 0.000061 | 0.00050 | | mg/L | 1 | 3/23/2022 3:53:04 PM | 66341 |
| Selenium | 0.0020 | 0.00037 | 0.0010 | | mg/L | 1 | 3/23/2022 12:10:57 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:26:32 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 9:35:00 AM

Lab ID: 2203989-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.12 | 0.0011 | 0.0020 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Nickel | 0.0079 | 0.0033 | 0.010 | J | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Vanadium | 0.0027 | 0.0017 | 0.050 | J | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| Zinc | 0.0059 | 0.0032 | 0.010 | J | mg/L | 1 | 3/18/2022 11:31:11 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:39:55 PM | B86624 |
| Arsenic | 0.00090 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 6:39:55 PM | B86624 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 3/21/2022 6:39:55 PM | B86624 |
| Selenium | 0.00068 | 0.00034 | 0.0010 | J | mg/L | 1 | 3/21/2022 6:39:55 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 1:28:41 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 20 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Chloromethane | 0.91 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,1-Dichloroethane | 0.63 | 0.27 | 1.0 | J | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Vinyl chloride | 0.44 | 0.32 | 1.0 | J | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Surr: Dibromofluoromethane | 94.2 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:39:30 AM | R86626 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:39:30 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.058 | 0.012 | 0.050 | | mg/L | 1 | 3/22/2022 2:39:30 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 2:39:30 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 9:38:02 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.38 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 8:58:35 PM | 66267 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 8:58:35 PM | 66267 |
| Surr: DNOP | 110 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 8:58:35 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: 2-Fluorophenol | 5.56 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: Phenol-d5 | 18.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 1.77 | 0 | 18.6-129 | S | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: Nitrobenzene-d5 | 52.9 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 51.0 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 71.8 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 2:13:14 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.6 | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 4:46:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 63.2 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 4:46:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 85.2 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 4:46:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|---------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.21 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Chromium | ND | 0.0021 | 0.0060 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Cobalt | 0.0059 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Nickel | 0.018 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Vanadium | 0.0044 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| Zinc | ND | 0.0064 | 0.010 | | mg/L | 1 | 4/6/2022 1:40:06 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 12:15:49 PM | 66341 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 12:15:49 PM | 66341 |
| Lead | ND | 0.00031 | 0.0025 | | mg/L | 5 | 3/23/2022 12:18:16 PM | 66341 |
| Selenium | 0.00069 | 0.00037 | 0.0010 | J | mg/L | 1 | 3/23/2022 12:15:49 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 3/24/2022 3:27:12 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:00:00 AM

Lab ID: 2203989-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.22 | 0.0011 | 0.0020 | | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Cobalt | 0.0053 | 0.0024 | 0.0060 | J | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Nickel | 0.020 | 0.0033 | 0.010 | | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Silver | 0.0017 | 0.0013 | 0.0050 | J | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| Zinc | 0.0061 | 0.0032 | 0.010 | J | mg/L | 1 | 3/18/2022 11:40:48 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:42:36 PM | B86624 |
| Arsenic | 0.00073 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/22/2022 12:08:55 PM | A86633 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/22/2022 12:08:55 PM | A86633 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 3/22/2022 12:08:55 PM | A86633 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 2:37:54 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 3.9 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,2-Dichloroethane (EDC) | 1.2 | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Chloromethane | 0.65 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| cis-1,2-DCE | 1.9 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,1-Dichloroethane | 25 | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,1-Dichloroethene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Trichloroethene (TCE) | 1.1 | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Vinyl chloride | 0.46 | 0.32 | 1.0 | J | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 99.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Surr: Dibromofluoromethane | 99.1 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:07:53 AM | R86626 |
| Surr: Toluene-d8 | 97.0 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:07:53 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.066 | 0.012 | 0.050 | | mg/L | 1 | 3/22/2022 3:07:53 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:07:53 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 9:53:03 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.13 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 9:22:10 PM | 66267 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 9:22:10 PM | 66267 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 9:22:10 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: 2-Fluorophenol | 44.0 | 0 | 29.4-87.7 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: Phenol-d5 | 35.3 | 0 | 28.5-64.7 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 67.6 | 0 | 18.6-129 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: Nitrobenzene-d5 | 54.4 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 87.2 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 2:55:06 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 17 | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 5:31:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.9 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 57.0 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 5:31:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 82.9 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 5:31:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.16 | 0.0016 | 0.0030 | | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Cadmium | ND | 0.0015 | 0.0020 | | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Chromium | 0.0027 | 0.0021 | 0.0060 | J | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Cobalt | 0.0041 | 0.0024 | 0.0060 | J | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Nickel | 0.017 | 0.0033 | 0.010 | | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Vanadium | 0.014 | 0.0024 | 0.050 | J | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| Zinc | 0.0082 | 0.0064 | 0.010 | J | mg/L | 1 | 4/6/2022 1:43:13 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/23/2022 12:20:43 PM | 66341 |
| Arsenic | 0.0014 | 0.00013 | 0.0010 | | mg/L | 1 | 3/23/2022 12:20:43 PM | 66341 |
| Lead | 0.0037 | 0.000061 | 0.00050 | | mg/L | 1 | 3/23/2022 12:20:43 PM | 66341 |
| Selenium | 0.0013 | 0.00037 | 0.0010 | | mg/L | 1 | 3/23/2022 12:20:43 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 2:40:02 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.039 | 0.0011 | 0.0020 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Nickel | 0.017 | 0.0033 | 0.010 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| Zinc | 0.0082 | 0.0032 | 0.010 | J | mg/L | 1 | 3/18/2022 11:44:07 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 3/21/2022 6:45:17 PM | B86624 |
| Arsenic | 0.00059 | 0.00012 | 0.0010 | J | mg/L | 1 | 3/21/2022 6:45:17 PM | B86624 |
| Lead | 0.000072 | 0.000057 | 0.00050 | J | mg/L | 1 | 3/21/2022 6:45:17 PM | B86624 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 3/21/2022 6:45:17 PM | B86624 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 2:42:11 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022 10:15:00 AM

Lab ID: 2203989-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 2-Butanone | 5.1 | 2.0 | 10 | J | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Chloromethane | 0.71 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.1 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 98.5 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Surr: Dibromofluoromethane | 94.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:36:15 AM | R86626 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 3:36:15 AM | R86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.49 | 0.23 | 1.0 | J | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | 17 | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,2-Dichloroethane (EDC) | 0.54 | 0.25 | 1.0 | J | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Chloromethane | 0.66 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,1-Dichloroethane | 0.89 | 0.27 | 1.0 | J | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 93.4 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Surr: Dibromofluoromethane | 95.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:04:36 AM | R86626 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:04:36 AM | R86626 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: JR | |
| Gasoline Range Organics (GRO) | 0.055 | 0.012 | 0.050 | | mg/L | 1 | 3/22/2022 4:04:36 AM | G86626 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:04:36 AM | G86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0034 | 0.0094 | | µg/L | 1 | 3/21/2022 10:08:05 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.38 | 0.016 | 0.064 | | mg/L | 1 | 3/22/2022 9:45:45 PM | 66267 |
| Motor Oil Range Organics (MRO) | 0.18 | 0.052 | 0.080 | | mg/L | 1 | 3/22/2022 9:45:45 PM | 66267 |
| Surr: DNOP | 93.8 | 0 | 42.2-138 | | %Rec | 1 | 3/22/2022 9:45:45 PM | 66267 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 1.1 | 20 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Bis(2-ethylhexyl)phthalate | ND | 4.5 | 10 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Di-n-butyl phthalate | ND | 6.5 | 10 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Di-n-octyl phthalate | ND | 3.1 | 20 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 1,4-Dichlorobenzene | ND | 0.70 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Diethyl phthalate | ND | 3.9 | 10 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Dimethyl phthalate | ND | 2.0 | 10 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 2,4-Dimethylphenol | ND | 0.97 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 2,4-Dinitrophenol | ND | 0.50 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 2-Methylphenol | ND | 0.51 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 3+4-Methylphenol | ND | 0.45 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Phenol | ND | 0.33 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Pyridine | ND | 10 | 10 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| 2,4,6-Trichlorophenol | ND | 0.43 | 5.0 | | µg/L | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: 2-Fluorophenol | 3.92 | 0 | 29.4-87.7 | S | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: Phenol-d5 | 9.97 | 0 | 28.5-64.7 | S | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: 2,4,6-Tribromophenol | 1.87 | 0 | 18.6-129 | S | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: Nitrobenzene-d5 | 61.0 | 0 | 36.9-103 | | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: 2-Fluorobiphenyl | 62.2 | 0 | 38.1-99.9 | | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| Surr: 4-Terphenyl-d14 | 87.3 | 0 | 48-155 | | %Rec | 1 | 3/24/2022 3:37:25 PM | 66282 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.6 | 0.048 | 1.0 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Naphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| 1-Methylnaphthalene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| 2-Methylnaphthalene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Acenaphthene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Fluorene | ND | 0.031 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Phenanthrene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Anthracene | ND | 0.034 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Fluoranthene | ND | 0.10 | 0.20 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Pyrene | ND | 0.16 | 0.20 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Benz(a)anthracene | ND | 0.036 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Chrysene | ND | 0.024 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Benzo(b)fluoranthene | ND | 0.057 | 0.10 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Indeno(1,2,3-cd)pyrene | ND | 0.043 | 0.30 | | µg/L | 1 | 3/23/2022 6:16:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.4 | 0 | 31.6-100 | | %Rec | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Surr: 2-Fluorobiphenyl | 66.1 | 0 | 26.7-90.1 | | %Rec | 1 | 3/23/2022 6:16:00 PM | R86694 |
| Surr: 4-Terphenyl-d14 | 81.9 | 0 | 72.3-147 | | %Rec | 1 | 3/23/2022 6:16:00 PM | R86694 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.076 | 0.0082 | 0.015 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Cadmium | ND | 0.0074 | 0.010 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Chromium | ND | 0.011 | 0.030 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Cobalt | 0.017 | 0.012 | 0.030 | J | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Nickel | 0.021 | 0.016 | 0.050 | J | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Vanadium | ND | 0.012 | 0.25 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| Zinc | ND | 0.032 | 0.050 | | mg/L | 5 | 4/6/2022 1:47:27 PM | 66643 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/23/2022 12:25:36 PM | 66341 |
| Arsenic | 0.0015 | 0.00063 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:25:36 PM | 66341 |
| Lead | 0.0017 | 0.00031 | 0.0025 | J | mg/L | 5 | 3/23/2022 12:25:36 PM | 66341 |
| Selenium | 0.0034 | 0.0019 | 0.0050 | J | mg/L | 5 | 3/23/2022 12:25:36 PM | 66341 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 2:44:19 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-3-17-22

Project: 2022 GW Sampling 1st Qtr

Collection Date: 3/17/2022

Lab ID: 2203989-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.068 | 0.0056 | 0.010 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Nickel | 0.030 | 0.016 | 0.050 | J | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Vanadium | ND | 0.0086 | 0.25 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 3/18/2022 11:49:06 AM | A86575 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 3/22/2022 12:17:01 PM | A86633 |
| Arsenic | 0.0012 | 0.00061 | 0.0050 | J | mg/L | 5 | 3/22/2022 12:17:01 PM | A86633 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 3/22/2022 12:17:01 PM | A86633 |
| Selenium | 0.0043 | 0.0017 | 0.0050 | J | mg/L | 5 | 3/22/2022 12:17:01 PM | A86633 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 3/24/2022 2:46:28 PM | 66371 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203989-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Chloromethane | 0.69 | 0.41 | 3.0 | J | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Surr: 1,2-Dichloroethane-d4 | 91.5 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Surr: Dibromofluoromethane | 97.5 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:32:57 AM | R86626 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 1 | 3/22/2022 4:32:57 AM | R86626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2203989

Date Reported: 4/22/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 1st Qtr

Collection Date:

Lab ID: 2203989-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0035 | 0.0095 | | µg/L | 1 | 3/21/2022 10:23:08 PM | 66262 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

March 30, 2022

Hall Environmental Analysis Laboratory

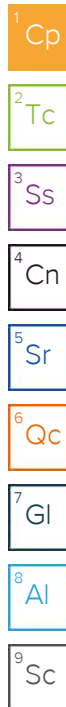
Sample Delivery Group: L1473975

Samples Received: 03/22/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| 2203989-004F MKTF-28 L1473975-04 | 8 |
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2203989-001F EB 3-17-22 L1473975-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:49 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2203989-002F MKTF-01R L1473975-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:50 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203989-003F MKTF-27 L1473975-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:55 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203989-004F MKTF-28 L1473975-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:56 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203989-005F MKTF-29 L1473975-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:58 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203989-006F MKTF-30 L1473975-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 12:59 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2203989-008F DUP-3-17-22 L1473975-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1836836 | 1 | 03/23/22 18:57 | 03/30/22 13:02 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/30/2022 12:49 | WG1836836 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 03/30/2022 12:50 | WG1836836 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0118 | | 0.00500 | 1 | 03/30/2022 12:55 | WG1836836 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 03/17/22 09:35

L1473975

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | P1 | 0.00500 | 1 | 03/30/2022 12:56 | WG1836836 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00741 | | 0.00500 | 1 | 03/30/2022 12:58 | WG1836836 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J6 | 0.00500 | 1 | 03/30/2022 12:59 | WG1836836 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0311 | | 0.00500 | 1 | 03/30/2022 13:02 | WG1836836 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3775665-1 03/30/22 12:43

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1473974-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1473974-05 03/30/22 12:47 • (DUP) R3775665-3 03/30/22 12:48

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1473975-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1473975-04 03/30/22 12:56 • (DUP) R3775665-6 03/30/22 12:57

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 73.6 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3775665-2 03/30/22 12:44

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1473975-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473975-02 03/30/22 12:50 • (MS) R3775665-4 03/30/22 12:51 • (MSD) R3775665-5 03/30/22 12:52

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.103 | 0.104 | 98.5 | 99.5 | 1 | 90.0-110 | | | 0.966 | 20 |

L1473975-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1473975-06 03/30/22 12:59 • (MS) R3775665-7 03/30/22 13:00 • (MSD) R3775665-8 03/30/22 13:01

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0893 | 0.0823 | 86.2 | 79.2 | 1 | 90.0-110 | J6 | J6 | 8.16 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

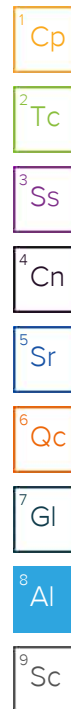
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

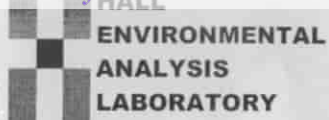
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1

OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: clients.hallenvironmental.com

E166

| | | | | | | | | | | | | | | | |
|------------------|--|----------------------|--|---------|--|---------|--|-------|--|----------------|--|-----------|--|----------------|--|
| SUB CONTRACTOR | | Pace TN | | COMPANY | | PACE TN | | PHONE | | (800) 767-5859 | | FAX | | (615) 758-5859 | |
| ADDRESS | | 12065 Lebanon Rd | | | | | | | | | | ACCOUNT # | | EMAIL | |
| CITY, STATE, ZIP | | Mt. Juliet, TN 37122 | | | | | | | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|-----------------|---|
| 1 | 2203989-001F | EB 3-17-22 | 500AMBHDP | Groundw | 3/17/2022 8:00:00 AM | 1 Total Cyanide | RCV 712
↓
-01
-02
-03
-04
-05
-06
-07 |
| 2 | 2203989-002F | MKTF-01R | 500AMBHDP | Groundw | 3/17/2022 8:46:00 AM | 1 Total Cyanide | |
| 3 | 2203989-003F | MKTF-27 | 500AMBHDP | Groundw | 3/17/2022 9:05:00 AM | 1 Total Cyanide | |
| 4 | 2203989-004F | MKTF-28 | 500AMBHDP | Groundw | 3/17/2022 9:35:00 AM | 1 Total Cyanide | |
| 5 | 2203989-005F | MKTF-29 | 500AMBHDP | Groundw | 3/17/2022 10:00:00 AM | 1 Total Cyanide | |
| 6 | 2203989-006F | MKTF-30 | 500AMBHDP | Groundw | 3/17/2022 10:15:00 AM | 1 Total Cyanide | |
| 7 | 2203989-008F | DUP-3-17-22 | 500AMBHDP | Groundw | 3/17/2022 | 1 Total Cyanide | |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|-----------------|---------------|---------------------------------|----------------|------------|-----------------------------|--------|
| Relinquished By: <i>me</i> | Date: 3/18/2022 | Time: 8:24 AM | Received By: <i>[Signature]</i> | Date: 03/21/22 | Time: 0900 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | HARDCOPY (extra cost) | FAX |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | EMAIL | ONLINE |
| TAT: Standard <i>p</i> RUSH Next BD 2nd BD 3rd BD | | | | | | FOR LAB USE ONLY | |
| Temp of samples: 2.3 BPA7 | | | | | | Attempt to Cool ? | |
| Comments: | | | | | | | |

TRF# 5528 5947 9466

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: MB-66643 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075587 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-66643 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075588 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.8 | 50 | 150 | | | J |
| Chromium | 0.0056 | 0.0060 | 0.006000 | 0 | 92.5 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 69.0 | 50 | 150 | | | J |
| Silver | 0.0043 | 0.0050 | 0.005000 | 0 | 86.5 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 99.8 | 50 | 150 | | | J |

| Sample ID: LCS-66643 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 66643 | RunNo: 87030 | | | | | | | | |
| Prep Date: 4/5/2022 | Analysis Date: 4/6/2022 | SeqNo: 3075589 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.4 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203989-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-01R | | Batch ID: 66643 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076391 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cadmium | 0.45 | 0.0020 | 0.5000 | 0 | 90.3 | 70 | 130 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 93.6 | 70 | 130 | | | |
| Cobalt | 0.44 | 0.0060 | 0.5000 | 0.005266 | 87.7 | 70 | 130 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0.02371 | 88.3 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.005401 | 99.7 | 70 | 130 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0.01104 | 88.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|--------|----------|------|
| Sample ID: 2203989-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-01R | | Batch ID: 66643 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076392 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0.903 | 20 | |
| Cadmium | 0.45 | 0.0020 | 0.5000 | 0 | 90.2 | 70 | 130 | 0.0482 | 20 | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 93.6 | 70 | 130 | 0.0369 | 20 | |
| Cobalt | 0.44 | 0.0060 | 0.5000 | 0.005266 | 87.3 | 70 | 130 | 0.496 | 20 | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0.02371 | 88.1 | 70 | 130 | 0.260 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | 0.234 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.005401 | 99.8 | 70 | 130 | 0.139 | 20 | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0.01104 | 88.2 | 70 | 130 | 0.0689 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2203989-003DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-27 | | Batch ID: 66643 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076404 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.015 | 0.5000 | 0.07267 | 92.8 | 70 | 130 | | | |
| Beryllium | 0.50 | 0.010 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Cadmium | 0.46 | 0.010 | 0.5000 | 0 | 91.4 | 70 | 130 | | | |
| Chromium | 0.46 | 0.030 | 0.5000 | 0 | 91.1 | 70 | 130 | | | |
| Cobalt | 0.46 | 0.030 | 0.5000 | 0.01521 | 88.6 | 70 | 130 | | | |
| Nickel | 0.47 | 0.050 | 0.5000 | 0.02103 | 89.1 | 70 | 130 | | | |
| Silver | 0.099 | 0.025 | 0.1000 | 0 | 99.2 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.25 | 0.5000 | 0 | 99.1 | 70 | 130 | | | |
| Zinc | 0.47 | 0.050 | 0.5000 | 0 | 94.6 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon
Project: 2022 GW Sampling 1st Qtr

| Sample ID: 2203989-003DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
|-----------------------------------|--------|--------------------------------|-----------|---|------|--------------------|-----------|---------|----------|------|
| Client ID: MKTF-27 | | Batch ID: 66643 | | RunNo: 87030 | | | | | | |
| Prep Date: 4/5/2022 | | Analysis Date: 4/6/2022 | | SeqNo: 3076405 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.55 | 0.015 | 0.5000 | 0.07267 | 95.0 | 70 | 130 | 2.08 | 20 | |
| Beryllium | 0.51 | 0.010 | 0.5000 | 0 | 102 | 70 | 130 | 1.86 | 20 | |
| Cadmium | 0.46 | 0.010 | 0.5000 | 0 | 91.9 | 70 | 130 | 0.547 | 20 | |
| Chromium | 0.46 | 0.030 | 0.5000 | 0 | 91.1 | 70 | 130 | 0.00219 | 20 | |
| Cobalt | 0.46 | 0.030 | 0.5000 | 0.01521 | 89.7 | 70 | 130 | 1.17 | 20 | |
| Nickel | 0.47 | 0.050 | 0.5000 | 0.02103 | 90.7 | 70 | 130 | 1.68 | 20 | |
| Silver | 0.10 | 0.025 | 0.1000 | 0 | 99.8 | 70 | 130 | 0.560 | 20 | |
| Vanadium | 0.50 | 0.25 | 0.5000 | 0 | 99.3 | 70 | 130 | 0.220 | 20 | |
| Zinc | 0.49 | 0.050 | 0.5000 | 0 | 98.6 | 70 | 130 | 4.14 | 20 | |

| Sample ID: MB | | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | |
|-----------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088697 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |

| Sample ID: LLLCS | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
|---------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: BatchQC | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088702 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0030 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |

| Sample ID: LCS | | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | |
|------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | | Batch ID: A87332 | | RunNo: 87332 | | | | | | |
| Prep Date: | | Analysis Date: 4/19/2022 | | SeqNo: 3088704 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A86575 | RunNo: 86575 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3055787 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86575 | RunNo: 86575 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3055788 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0020 | 0.002000 | 0 | 84.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.9 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.1 | 50 | 150 | | | J |
| Chromium | 0.0066 | 0.0060 | 0.006000 | 0 | 111 | 50 | 150 | | | |
| Cobalt | 0.0059 | 0.0060 | 0.006000 | 0 | 99.1 | 50 | 150 | | | J |
| Nickel | 0.0058 | 0.010 | 0.005000 | 0 | 117 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 101 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 111 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 111 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A86575 | RunNo: 86575 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3055789 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: 2203989-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB 3-17-22 | Batch ID: A86575 | RunNo: 86575 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3055804 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 70 | 130 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 70 | 130 | | | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Nickel | 0.52 | 0.010 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 109 | 70 | 130 | | | |
| Zinc | 0.57 | 0.010 | 0.5000 | 0.004398 | 112 | 70 | 130 | | | |

| Sample ID: 2203989-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB 3-17-22 | Batch ID: A86575 | RunNo: 86575 | | | | | | | | |
| Prep Date: | Analysis Date: 3/18/2022 | SeqNo: 3055805 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.56 | 0.0020 | 0.5000 | 0 | 112 | 70 | 130 | 4.48 | 20 | |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 114 | 70 | 130 | 3.54 | 20 | |
| Cadmium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | 2.98 | 20 | |
| Chromium | 0.55 | 0.0060 | 0.5000 | 0 | 110 | 70 | 130 | 3.43 | 20 | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0 | 109 | 70 | 130 | 2.33 | 20 | |
| Nickel | 0.54 | 0.010 | 0.5000 | 0 | 107 | 70 | 130 | 2.71 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 110 | 70 | 130 | 3.40 | 20 | |
| Vanadium | 0.56 | 0.050 | 0.5000 | 0 | 112 | 70 | 130 | 3.42 | 20 | |
| Zinc | 0.58 | 0.010 | 0.5000 | 0.004398 | 115 | 70 | 130 | 2.52 | 20 | |

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088745 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |

| Sample ID: LLLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088746 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.4 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------|--------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A87332 | RunNo: 87332 | | | | | | | | |
| Prep Date: | Analysis Date: 4/19/2022 | SeqNo: 3088747 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058718 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058719 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058720 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-66341 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 66341 | RunNo: 86680 | | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | SeqNo: 3060282 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-66341 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 66341 | RunNo: 86680 | | | | | | | | |
| Prep Date: 3/22/2022 | Analysis Date: 3/23/2022 | SeqNo: 3060284 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-66341 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 66341 | | | RunNo: 86680 | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | | SeqNo: 3060284 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLLCS-66341 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 66341 | | RunNo: 86680 | | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | SeqNo: 3060285 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00088 | 0.0010 | 0.001000 | 0 | 88.4 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.00078 | 0.0010 | 0.001000 | 0 | 77.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2203989-001DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB 3-17-22 | | Batch ID: 66341 | | RunNo: 86680 | | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | SeqNo: 3060294 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.2 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|--------|----------|------|
| Sample ID: 2203989-001DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: EB 3-17-22 | | Batch ID: 66341 | | | RunNo: 86680 | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | | SeqNo: 3060295 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.9 | 70 | 130 | 0.649 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 0.322 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 70 | 130 | 1.23 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 0.0262 | 20 | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2203989-002DMSLL SampType: MS TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: MKTF-01R | | Batch ID: 66341 | | | RunNo: 86680 | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | | SeqNo: 3060297 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: 2203989-002DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: MKTF-01R | | Batch ID: 66341 | | RunNo: 86680 | | | | | | |
| Prep Date: 3/22/2022 | | Analysis Date: 3/23/2022 | | SeqNo: 3060297 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 93.0 | 70 | 130 | | | |
| Arsenic | 0.034 | 0.0010 | 0.02500 | 0.005434 | 116 | 70 | 130 | | | |
| Lead | 0.014 | 0.00050 | 0.01250 | 0.002130 | 92.7 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0.0007450 | 106 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058031 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058032 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B86624 | RunNo: 86624 | | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | SeqNo: 3058033 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 85 | 115 | | | |
| Lead | 0.014 | 0.00050 | 0.01250 | 0 | 108 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058721 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058722 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| | | | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058722 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 104 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058723 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2203989-003EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-27 | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058739 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.13 | 0.0050 | 0.1250 | 0 | 102 | 70 | 130 | | | |
| Arsenic | 0.15 | 0.0050 | 0.1250 | 0.001127 | 116 | 70 | 130 | | | |
| Lead | 0.056 | 0.0025 | 0.06250 | 0 | 89.2 | 70 | 130 | | | |
| Selenium | 0.14 | 0.0050 | 0.1250 | 0.004667 | 107 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2203989-003EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-27 | Batch ID: A86633 | RunNo: 86633 | | | | | | | | |
| Prep Date: | Analysis Date: 3/22/2022 | SeqNo: 3058740 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.13 | 0.0050 | 0.1250 | 0 | 102 | 70 | 130 | 0.712 | 20 | |
| Arsenic | 0.15 | 0.0050 | 0.1250 | 0.001127 | 118 | 70 | 130 | 1.86 | 20 | |
| Lead | 0.056 | 0.0025 | 0.06250 | 0 | 88.8 | 70 | 130 | 0.417 | 20 | |
| Selenium | 0.16 | 0.0050 | 0.1250 | 0.004667 | 124 | 70 | 130 | 14.3 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-66371 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 66371 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061893 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-66371 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 66371 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061894 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 0.0001500 0 118 50 150 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-66371 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 66371 | RunNo: 86726 |
| Prep Date: 3/24/2022 | Analysis Date: 3/24/2022 | SeqNo: 3061895 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.4 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057941 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66262 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66262 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057942 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66262 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66262 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057944 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-66256 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057948 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66256 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66256 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057949 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 0.1000 0 98.4 70 130 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-66262 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 66262 | RunNo: 86618 |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | SeqNo: 3057950 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 102 70 130 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|--------|----------|------|
| Sample ID: LCSD-66256 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 66256 | | | RunNo: 86618 | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | | | SeqNo: 3057951 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.3 | 70 | 130 | 0.0963 | 20 | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-66262 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 66262 | | | RunNo: 86618 | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/21/2022 | | | SeqNo: 3057952 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.099 | 0.010 | 0.1000 | 0 | 98.6 | 70 | 130 | 3.56 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | |
|--------------------------------|--------------------------|--|
| Sample ID: MB-66267 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: PBW | Batch ID: 66267 | RunNo: 86643 |
| Prep Date: 3/18/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059916 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.027 | 0.064 J |
| Motor Oil Range Organics (MRO) | ND | 0.080 |
| Surr: DNOP | 0.041 | 0.03750 109 42.2 138 |

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: LCSD-66267 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: LCSS02 | Batch ID: 66267 | RunNo: 86643 |
| Prep Date: 3/18/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059917 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 0.1875 0 71.2 31.7 75.4 15.1 20 |
| Surr: DNOP | 0.021 | 0.01875 114 42.2 138 0 0 |

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: LCS-66267 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: LCSW | Batch ID: 66267 | RunNo: 86643 |
| Prep Date: 3/18/2022 | Analysis Date: 3/22/2022 | SeqNo: 3059919 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 0.1875 0 61.2 31.7 75.4 |
| Surr: DNOP | 0.020 | 0.01875 106 42.2 138 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058196 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 93.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 86.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058226 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | 0.68 | 3.0 | | | | | | | | J |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86626 | | | RunNo: 86626 | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | | SeqNo: 3058226 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 90.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-66282 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 66282 | | RunNo: 86693 | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/23/2022 | | SeqNo: 3061248 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 51.8 | 15 | 87.6 | | | |
| Phenol | 75 | 5.0 | 200.0 | 0 | 37.4 | 16.8 | 70.5 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.1 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 74 | | 200.0 | | 37.0 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 65.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 81 | | 100.0 | | 81.0 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-66282 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 66282 | | RunNo: 86693 | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/23/2022 | | SeqNo: 3061249 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dichlorobenzene | 58 | 5.0 | 100.0 | 0 | 58.3 | 15 | 87.6 | 11.8 | 30.4 | |
| Phenol | 79 | 5.0 | 200.0 | 0 | 39.4 | 16.8 | 70.5 | 5.11 | 37.2 | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 52.0 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 79 | | 200.0 | | 39.4 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 67.5 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 64.7 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 60.6 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 100.0 | | 96.5 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-66282 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 66282 | | RunNo: 86737 | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/24/2022 | | SeqNo: 3062562 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 5.0 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | 5.0 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66282 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 66282 | RunNo: 86737 | | | | | | | | |
| Prep Date: 3/21/2022 | Analysis Date: 3/24/2022 | SeqNo: 3062562 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Phenol | ND | 5.0 | | | | | | | | |
| Pyridine | ND | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 5.0 | | | | | | | | |
| Surr: 2-Fluorophenol | 86 | | 200.0 | | 42.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 34.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 51.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 49.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 47 | | 100.0 | | 46.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 79.7 | 48 | 155 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| Sample ID: mb-66282 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061263 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.10 | | | | | | | | |
| Acenaphthene | ND | 0.10 | | | | | | | | |
| Fluorene | ND | 0.10 | | | | | | | | |
| Phenanthrene | ND | 0.10 | | | | | | | | |
| Anthracene | ND | 0.10 | | | | | | | | |
| Fluoranthene | ND | 0.20 | | | | | | | | |
| Pyrene | ND | 0.20 | | | | | | | | |
| Benz(a)anthracene | ND | 0.10 | | | | | | | | |
| Chrysene | ND | 0.10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 61.1 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 85 | | 200.0 | | 42.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 57.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.4 | 72.3 | 147 | | | |

| Sample ID: lcs-66282-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R86694 | RunNo: 86694 | | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | SeqNo: 3061264 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.10 | 2.000 | 0 | 36.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 54.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 62.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 74.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.7 | 0.20 | 2.000 | 0 | 87.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 84.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.10 | 2.000 | 0 | 101 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.10 | 2.000 | 0 | 95.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 114 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.2 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-66282-If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: R86694 | | RunNo: 86694 | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | | SeqNo: 3061264 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.0 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: Icsd-66282-If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: R86694 | | RunNo: 86694 | | | | | | | |
| Prep Date: | Analysis Date: 3/23/2022 | | SeqNo: 3061265 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.70 | 0.10 | 2.000 | 0 | 35.0 | 20.2 | 48.4 | 2.82 | 30.1 | |
| Naphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 21.3 | 79.9 | 1.87 | 25.6 | |
| 1-Methylnaphthalene | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.0 | 0.10 | 2.000 | 0 | 52.0 | 20.6 | 80.1 | 0 | 25 | |
| Acenaphthene | 1.2 | 0.10 | 2.000 | 0 | 61.0 | 29.8 | 82.7 | 1.63 | 27.8 | |
| Fluorene | 1.3 | 0.10 | 2.000 | 0 | 66.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.4 | 0.10 | 2.000 | 0 | 72.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.5 | 0.10 | 2.000 | 0 | 76.0 | 41.1 | 95.6 | 2.67 | 25.6 | |
| Fluoranthene | 1.8 | 0.20 | 2.000 | 0 | 90.0 | 52.9 | 123 | 3.39 | 22.8 | |
| Pyrene | 1.7 | 0.20 | 2.000 | 0 | 84.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.1 | 0.10 | 2.000 | 0 | 103 | 51 | 147 | 1.96 | 24.1 | |
| Chrysene | 1.8 | 0.10 | 2.000 | 0 | 88.0 | 55.3 | 115 | 1.13 | 20 | |
| Benzo(b)fluoranthene | 2.0 | 0.10 | 2.000 | 0 | 98.0 | 44.4 | 136 | 3.11 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 113 | 31.4 | 165 | 0.881 | 21.1 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.5 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.6 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.6 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2203989

22-Apr-22

Client: Marathon

Project: 2022 GW Sampling 1st Qtr

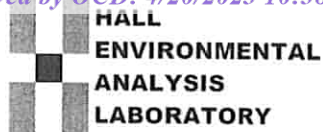
| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug lcs gro | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058229 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G86626 | | RunNo: 86626 | | | | | | | |
| Prep Date: | Analysis Date: 3/21/2022 | | SeqNo: 3058249 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.034 | 0.050 | | | | | | | | J |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2203989**

RcptNo: 1

Received By: **Cheyenne Cason**

3/18/2022 7:25:00 AM

*Chad*Completed By: **Cheyenne Cason**

3/18/2022 8:21:48 AM

Chad

Reviewed By:

*KPG**3/18/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

14 7
(2 or >2 unless noted)

Adjusted?

NO

Checked by:

JW 3/18/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.3 | Good | Yes | | | |
| 2 | 1.7 | Good | Yes | | | |
| 3 | 0.8 | Good | Yes | | | |
| 4 | 1.3 | Good | Yes | | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix C-2. 2nd Quarter Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 15, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206B30

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/22/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 12, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206B30
Date: 8/15/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Analytical Notes Regarding EPA Method 8270:

Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270SIMS, depending which method needs the least dilution. In this report Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMS for sample MKTF-18R. Naphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMS for sample MKTF-35.

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 12:56:52 PM | A89029 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 12:56:52 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Acetone | 3.2 | 2.5 | 10 | J | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Methylene Chloride | 0.80 | 0.50 | 3.0 | J | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 97.7 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 79.7 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:56:00 PM | W89041 |
| Surr: Toluene-d8 | 112 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:56:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 4:49:26 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.041 | 0.016 | 0.064 | J | mg/L | 1 | 7/5/2022 4:20:59 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 4:20:59 PM | 68348 |
| Surr: DNOP | 94.4 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 4:20:59 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: 2-Fluorophenol | 45.1 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: Phenol-d5 | 33.9 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 56.6 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: Nitrobenzene-d5 | 59.0 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 56.4 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 82.5 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 12:44:36 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 12:45:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.2 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 59.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 12:45:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 102 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 12:45:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:24:57 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 10:48:01 AM | 68353 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 10:48:01 AM | 68353 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 10:48:01 AM | 68353 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/27/2022 10:48:01 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 11:54:32 AM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| Zinc | 0.0075 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 11:26:23 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:32:57 AM | A88981 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/23/2022 11:32:57 AM | A88981 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/23/2022 11:32:57 AM | A88981 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:32:57 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 11:56:40 AM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:00:00 AM

Lab ID: 2206B30-001F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:18:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
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| | D | Sample Diluted Due to Matrix | E | Estimated value |
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| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.016 | 0.0090 | 0.050 | J | mg/L | 1 | 6/24/2022 1:20:35 PM | A89029 |
| Surr: BFB | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 1:20:35 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 90.9 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 88.5 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 5:19:00 PM | W89041 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 5:19:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 6/24/2022 5:19:35 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.070 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 4:44:46 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 4:44:46 PM | 68348 |
| Surr: DNOP | 97.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 4:44:46 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: 2-Fluorophenol | 35.0 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: Phenol-d5 | 26.3 | 0 | 28.5-64.7 | S | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 46.9 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: Nitrobenzene-d5 | 47.2 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 42.9 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 70.4 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 1:27:55 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.5 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Phenanthrene | 0.22 | 0.16 | 0.30 | J | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 1:29:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.2 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 52.7 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 1:29:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 90.8 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 1:29:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.080 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Chromium | 0.0021 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Vanadium | 0.0040 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| Zinc | 0.0048 | 0.0039 | 0.010 | J | mg/L | 1 | 6/27/2022 9:26:35 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 10:50:28 AM | 68353 |
| Arsenic | 0.00086 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/27/2022 10:50:28 AM | 68353 |
| Lead | 0.0014 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 10:50:28 AM | 68353 |
| Selenium | 0.00045 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/27/2022 10:50:28 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 6/24/2022 11:58:49 AM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:20:00 AM

Lab ID: 2206B30-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.037 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Silver | 0.0032 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Vanadium | 0.0040 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| Zinc | 0.0084 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 11:30:48 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:35:38 AM | A88981 |
| Arsenic | 0.00066 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/23/2022 11:35:38 AM | A88981 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/23/2022 11:35:38 AM | A88981 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:35:38 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:00:58 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | MKTF-46 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/21/2022 8:20:00 AM |
| Lab ID: | 2206B30-002F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:19:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 10 | 0.090 | 0.50 | P | mg/L | 10 | 6/24/2022 1:44:19 PM | A89029 |
| Surr: BFB | 107 | 0 | 70-130 | P | %Rec | 10 | 6/24/2022 1:44:19 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 2100 | 23 | 100 | | µg/L | 100 | 6/27/2022 6:27:00 PM | W89041 |
| Toluene | 770 | 2.0 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Ethylbenzene | 51 | 2.1 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | 130 | 3.9 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | 43 | 1.2 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | 16 | 1.8 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| cis-1,2-DCE | 5.7 | 3.9 | 10 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Isopropylbenzene | 5.0 | 1.8 | 10 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 4-Isopropyltoluene | 2.7 | 2.0 | 10 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| n-Butylbenzene | 3.7 | 2.5 | 30 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| n-Propylbenzene | 5.6 | 1.8 | 10 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| sec-Butylbenzene | 2.6 | 1.4 | 10 | J | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Xylenes, Total | 440 | 3.7 | 15 | | µg/L | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 94.7 | 0 | 70-130 | | %Rec | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 97.8 | 0 | 70-130 | | %Rec | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Surr: Dibromofluoromethane | 98.2 | 0 | 70-130 | | %Rec | 10 | 6/27/2022 6:50:00 PM | W89041 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 10 | 6/27/2022 6:50:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 5:49:52 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|---------------------|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | Analyst: SB | | |
| Diesel Range Organics (DRO) | 3.5 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 5:08:40 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 5:08:40 PM | 68348 |
| Surr: DNOP | 96.9 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 5:08:40 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | Analyst: JME | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 1-Methylnaphthalene | 84 | 4.3 | 5.0 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 2-Methylnaphthalene | 93 | 4.2 | 5.0 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 2-Methylphenol | 7.3 | 5.0 | 10 | J | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Naphthalene | 55 | 3.2 | 5.0 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: 2-Fluorophenol | 44.7 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: Phenol-d5 | 33.3 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 58.7 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: Nitrobenzene-d5 | 55.7 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 50.6 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 71.9 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 2:11:24 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | 13 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Acenaphthene | 6.3 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Fluorene | 8.0 | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Phenanthrene | 6.7 | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Anthracene | 0.42 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Benz(a)anthracene | 0.16 | 0.15 | 0.30 | J | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 2:13:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.4 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 53.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 2:13:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 74.9 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 2:13:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 2.0 | 0.0079 | 0.015 | | mg/L | 5 | 6/28/2022 6:55:35 PM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Chromium | 0.0028 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Cobalt | 0.0051 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Nickel | 0.0079 | 0.0053 | 0.010 | J | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Vanadium | 0.011 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| Zinc | 0.0044 | 0.0039 | 0.010 | J | mg/L | 1 | 6/27/2022 9:28:01 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 10:52:54 AM | 68353 |
| Arsenic | 0.0065 | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 10:52:54 AM | 68353 |
| Lead | 0.0052 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 10:52:54 AM | 68353 |
| Selenium | 0.00075 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/27/2022 10:52:54 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:03:08 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 8:45:00 AM

Lab ID: 2206B30-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 1.6 | 0.0056 | 0.010 | | mg/L | 5 | 6/23/2022 11:37:10 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Nickel | 0.0062 | 0.0033 | 0.010 | J | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Vanadium | 0.0024 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| Zinc | 0.0099 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 11:35:12 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:38:19 AM | A88981 |
| Arsenic | 0.0085 | 0.00012 | 0.0010 | | mg/L | 1 | 6/23/2022 11:38:19 AM | A88981 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/23/2022 11:38:19 AM | A88981 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:38:19 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:05:17 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | MKTF-18R |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/21/2022 8:45:00 AM |
| Lab ID: | 2206B30-003F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:20:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 64 | 0.090 | 0.50 | | mg/L | 10 | 6/24/2022 2:08:03 PM | A89029 |
| Surr: BFB | 151 | 0 | 70-130 | S | %Rec | 10 | 6/24/2022 2:08:03 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 14000 | 45 | 200 | | µg/L | 200 | 6/27/2022 7:13:00 PM | W89041 |
| Toluene | 3300 | 40 | 200 | | µg/L | 200 | 6/27/2022 7:13:00 PM | W89041 |
| Ethylbenzene | 1700 | 4.3 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | 770 | 7.9 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | 640 | 2.4 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | 110 | 3.6 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 5.1 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Acetone | ND | 50 | 200 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Bromomethane | ND | 17 | 60 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 2-Butanone | ND | 41 | 200 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Carbon disulfide | ND | 12 | 200 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Chlorobenzene | ND | 3.1 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Chloroform | ND | 2.7 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Chloromethane | ND | 8.2 | 60 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| cis-1,2-DCE | ND | 7.8 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 5.5 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 4.0 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Isopropylbenzene | 40 | 3.7 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 4-Isopropyltoluene | 6.1 | 4.0 | 20 | J | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Methylene Chloride | ND | 10 | 60 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| n-Butylbenzene | 8.0 | 5.1 | 60 | J | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| n-Propylbenzene | 100 | 3.6 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| sec-Butylbenzene | 5.4 | 2.9 | 20 | J | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Styrene | ND | 2.7 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 7.1 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 6.0 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 4.1 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Vinyl chloride | ND | 6.4 | 20 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Xylenes, Total | 4200 | 7.4 | 30 | | µg/L | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 91.0 | 0 | 70-130 | | %Rec | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 97.7 | 0 | 70-130 | | %Rec | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Surr: Dibromofluoromethane | 92.7 | 0 | 70-130 | | %Rec | 20 | 6/27/2022 7:36:00 PM | W89041 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 20 | 6/27/2022 7:36:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 6:20:04 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.2 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 5:32:29 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 5:32:29 PM | 68348 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 5:32:29 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 2-Methylnaphthalene | 21 | 4.2 | 5.0 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Naphthalene | 110 | 3.2 | 5.0 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Phenol | 38 | 18 | 20 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: Phenol-d5 | 32.2 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 48.2 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: Nitrobenzene-d5 | 56.1 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 50.4 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 71.2 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 2:54:20 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.0 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| 1-Methylnaphthalene | 16 | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Acenaphthene | 1.6 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Fluorene | 0.88 | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Phenanthrene | 0.38 | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Anthracene | 0.30 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 2:57:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.7 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 54.5 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 2:57:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 75.8 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 2:57:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|-----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 21 | 0.16 | 0.30 | * | mg/L | 100 | 6/28/2022 7:30:13 PM | 68353 |
| Beryllium | 0.0061 | 0.00088 | 0.0020 | * | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Chromium | 0.057 | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Cobalt | 0.053 | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Nickel | 0.066 | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Vanadium | 0.16 | 0.0035 | 0.050 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| Zinc | 0.15 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:29:28 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/27/2022 10:55:21 AM | 68353 |
| Arsenic | 0.029 | 0.00063 | 0.0050 | * | mg/L | 5 | 6/27/2022 10:55:21 AM | 68353 |
| Lead | 0.12 | 0.00031 | 0.0025 | * | mg/L | 5 | 6/27/2022 10:55:21 AM | 68353 |
| Selenium | 0.018 | 0.0019 | 0.0050 | | mg/L | 5 | 6/27/2022 10:55:21 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00031 | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:07:28 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-35

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:05:00 AM

Lab ID: 2206B30-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 3.9 | 0.0056 | 0.010 | * | mg/L | 5 | 6/23/2022 11:41:18 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Silver | 0.0028 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Vanadium | 0.0029 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 11:39:21 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00076 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/23/2022 11:41:00 AM | A88981 |
| Arsenic | 0.0013 | 0.00012 | 0.0010 | | mg/L | 1 | 6/23/2022 11:41:00 AM | A88981 |
| Lead | 0.00021 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/23/2022 11:41:00 AM | A88981 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:41:00 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:09:36 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | MKTF-35 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/21/2022 9:05:00 AM |
| Lab ID: | 2206B30-004F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:21:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.034 | 0.0090 | 0.050 | J | mg/L | 1 | 6/24/2022 2:31:46 PM | A89029 |
| Surr: BFB | 96.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 2:31:46 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 2.1 | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | 1.8 | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Acetone | 5.4 | 2.5 | 10 | J | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,1-Dichloroethene | 0.31 | 0.20 | 1.0 | J | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Trichloroethene (TCE) | 0.47 | 0.20 | 1.0 | J | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 95.8 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 96.6 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Surr: Dibromofluoromethane | 99.7 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 7:59:00 PM | W89041 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 7:59:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/24/2022 6:50:25 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.22 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 5:56:23 PM | 68348 |
| Motor Oil Range Organics (MRO) | 0.24 | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 5:56:23 PM | 68348 |
| Surr: DNOP | 91.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 5:56:23 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: 2-Fluorophenol | 40.5 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: Phenol-d5 | 30.0 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 61.8 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: Nitrobenzene-d5 | 63.9 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 58.3 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 86.6 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 3:36:50 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.6 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 3:41:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.3 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 59.4 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 3:41:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 89.6 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 3:41:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.66 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Chromium | 0.011 | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Cobalt | 0.0097 | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Nickel | 0.011 | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Vanadium | 0.026 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| Zinc | 0.074 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:35:56 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:02:41 AM | 68353 |
| Arsenic | 0.0070 | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 11:02:41 AM | 68353 |
| Lead | 0.014 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 11:02:41 AM | 68353 |
| Selenium | 0.0035 | 0.00037 | 0.0010 | | mg/L | 1 | 6/27/2022 11:02:41 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:11:43 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 9:35:00 AM

Lab ID: 2206B30-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.044 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Nickel | 0.0059 | 0.0033 | 0.010 | J | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Silver | 0.0027 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Vanadium | 0.0039 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 11:50:14 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:49:05 AM | A88981 |
| Arsenic | 0.0054 | 0.00012 | 0.0010 | | mg/L | 1 | 6/23/2022 11:49:05 AM | A88981 |
| Lead | 0.00010 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/23/2022 11:49:05 AM | A88981 |
| Selenium | 0.0018 | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:49:05 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:13:51 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | MKTF-38 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/21/2022 9:35:00 AM |
| Lab ID: | 2206B30-005F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:26:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 14 | 0.090 | 0.50 | | mg/L | 10 | 6/24/2022 2:55:37 PM | A89029 |
| Surr: BFB | 121 | 0 | 70-130 | | %Rec | 10 | 6/24/2022 2:55:37 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 3500 | 23 | 100 | | µg/L | 100 | 6/29/2022 4:32:44 PM | A89138 |
| Toluene | 96 | 2.0 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Ethylbenzene | 300 | 2.1 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Methyl tert-butyl ether (MTBE) | 19 | 3.9 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,2,4-Trimethylbenzene | 120 | 1.2 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,3,5-Trimethylbenzene | 25 | 1.8 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Isopropylbenzene | 15 | 1.8 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| n-Butylbenzene | ND | 2.5 | 30 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| n-Propylbenzene | 29 | 1.8 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| sec-Butylbenzene | 5.7 | 1.4 | 10 | J | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Vinyl chloride | 21 | 3.2 | 10 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Xylenes, Total | 580 | 3.7 | 15 | | µg/L | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 70-130 | | %Rec | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 10 | 6/28/2022 11:59:57 AM | R89107 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 10 | 6/28/2022 11:59:57 AM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 7:35:38 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.3 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 6:20:16 PM | 68348 |
| Motor Oil Range Organics (MRO) | 0.82 | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 6:20:16 PM | 68348 |
| Surr: DNOP | 99.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 6:20:16 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Phenol | 28 | 18 | 20 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: 2-Fluorophenol | 43.9 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: Phenol-d5 | 33.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 53.2 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: Nitrobenzene-d5 | 56.5 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 50.2 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 75.2 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 4:20:00 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 6.6 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Naphthalene | 14 | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| 1-Methylnaphthalene | 5.4 | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| 2-Methylnaphthalene | 5.1 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Acenaphthene | 0.44 | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Fluorene | 1.1 | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Phenanthrene | 0.38 | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 4:25:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 58.8 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 4:25:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 77.5 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 4:25:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 3.9 | 0.0079 | 0.015 | * | mg/L | 5 | 6/28/2022 6:59:51 PM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Cobalt | 0.0049 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Nickel | 0.022 | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| Zinc | 0.020 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:37:22 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:05:08 AM | 68353 |
| Arsenic | 0.013 | 0.00013 | 0.0010 | * | mg/L | 1 | 6/27/2022 11:05:08 AM | 68353 |
| Lead | 0.0012 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 11:05:08 AM | 68353 |
| Selenium | 0.00047 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/27/2022 11:05:08 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:20:15 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-11

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:00:00 AM

Lab ID: 2206B30-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 3.5 | 0.0056 | 0.010 | * | mg/L | 5 | 6/23/2022 11:56:43 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Nickel | 0.025 | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Silver | 0.0029 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Vanadium | 0.0030 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| Zinc | 0.018 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 11:54:44 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:51:46 AM | A88981 |
| Arsenic | 0.011 | 0.00061 | 0.0050 | * | mg/L | 5 | 6/23/2022 12:02:32 PM | A88981 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/23/2022 12:02:32 PM | A88981 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/23/2022 12:02:32 PM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:22:22 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206B30-006F

Client Sample ID: MKTF-11

Collection Date: 6/21/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:27:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.30 | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 3:19:21 PM | A89029 |
| Surr: BFB | 111 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 3:19:21 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 66 | 0.23 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Ethylbenzene | 12 | 0.21 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Methyl tert-butyl ether (MTBE) | 3.5 | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,2,4-Trimethylbenzene | 6.5 | 0.12 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Acetone | 4.0 | 2.5 | 10 | J | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,1-Dichloroethane | 4.7 | 0.27 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Isopropylbenzene | 0.48 | 0.18 | 1.0 | J | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| n-Propylbenzene | 1.1 | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| 1,1,1-Trichloroethane | 0.95 | 0.30 | 1.0 | J | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Vinyl chloride | 0.93 | 0.32 | 1.0 | J | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Xylenes, Total | 2.2 | 0.37 | 1.5 | | µg/L | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Surr: 4-Bromofluorobenzene | 99.8 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:28:28 PM | R89107 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:28:28 PM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/24/2022 8:05:49 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|-------|-----------|------|--------------|----|---------------------|----------|
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: JME | | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: 2-Fluorophenol | 48.9 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: Phenol-d5 | 36.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 60.4 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: Nitrobenzene-d5 | 62.1 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 61.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 74.7 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 5:03:05 PM | 68332 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | 1.4 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| 1-Methylnaphthalene | 0.16 | 0.15 | 0.30 | J | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Surr: Nitrobenzene-d5 | 73.4 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 65.0 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 5:08:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 80.9 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 5:08:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 3.6 | 0.0079 | 0.015 | * | mg/L | 5 | 6/28/2022 7:01:59 PM | 68353 |
| Beryllium | 0.0025 | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Chromium | 0.031 | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Cobalt | 0.019 | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Nickel | 0.032 | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Vanadium | 0.053 | 0.0035 | 0.050 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| Zinc | 0.37 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:38:46 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:07:34 AM | 68353 |
| Arsenic | 0.0070 | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 11:07:34 AM | 68353 |
| Lead | 0.040 | 0.00031 | 0.0025 | * | mg/L | 5 | 6/27/2022 11:41:48 AM | 68353 |
| Selenium | 0.0058 | 0.00037 | 0.0010 | | mg/L | 1 | 6/27/2022 11:07:34 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00098 | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:24:30 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.21 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Nickel | 0.0054 | 0.0033 | 0.010 | J | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Vanadium | 0.0038 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| Zinc | 0.034 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 11:58:53 AM | A88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00070 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/23/2022 11:54:27 AM | A88981 |
| Arsenic | 0.0014 | 0.00012 | 0.0010 | | mg/L | 1 | 6/23/2022 11:54:27 AM | A88981 |
| Lead | 0.00017 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/23/2022 11:54:27 AM | A88981 |
| Selenium | 0.00049 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/23/2022 11:54:27 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:26:38 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206B30-007F

Client Sample ID: MKTF-16

Collection Date: 6/21/2022 10:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:28:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022 10:20:00 AM

Lab ID: 2206B30-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Acetone | 3.6 | 2.5 | 10 | J | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:57:01 PM | R89107 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 12:57:01 PM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 3:43:06 PM | A89029 |
| Surr: BFB | 99.2 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 3:43:06 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:25:35 PM | R89107 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:25:35 PM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 8:36:00 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 6:44:12 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 6:44:12 PM | 68348 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 6:44:12 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: 2-Fluorophenol | 40.7 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: Phenol-d5 | 30.9 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 49.1 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: Nitrobenzene-d5 | 53.3 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 48.3 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 72.3 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 5:47:20 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.7 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 5:53:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.0 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 54.6 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 5:53:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 84.7 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 5:53:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.080 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Chromium | 0.0023 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Vanadium | 0.0044 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| Zinc | 0.0040 | 0.0039 | 0.010 | J | mg/L | 1 | 6/27/2022 9:40:11 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:10:01 AM | 68353 |
| Arsenic | 0.00078 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/27/2022 11:10:01 AM | 68353 |
| Lead | 0.0014 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 11:10:01 AM | 68353 |
| Selenium | 0.00051 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/27/2022 11:10:01 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 6/24/2022 12:28:47 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.037 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Silver | 0.0034 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Vanadium | 0.0042 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| Zinc | 0.0071 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 12:11:03 PM | B88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/23/2022 11:57:09 AM | A88981 |
| Arsenic | 0.00062 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/23/2022 11:57:09 AM | A88981 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/23/2022 11:57:09 AM | A88981 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/23/2022 11:57:09 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:30:56 PM | 68333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-21-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/21/2022

Lab ID: 2206B30-009F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|---------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 7/1/2022 1:29:00 PM | R89481 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206B30-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
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| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206B30

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206B30-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Surr: 4-Bromofluorobenzene | 99.1 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:54:10 PM | R89107 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 1:54:10 PM | R89107 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

July 05, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1508211

Samples Received: 06/23/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
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| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
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| 2206B30-002F MKTF-46 L1508211-02 | 6 | <div><div>4</div>Cn</div> |
| 2206B30-003F MKTF-18R L1508211-03 | 7 | <div><div>5</div>Sr</div> |
| 2206B30-004F MKTF-35 L1508211-04 | 8 | |
| 2206B30-005F MKTF-38 L1508211-05 | 9 | <div><div>6</div>Qc</div> |
| 2206B30-006F MKTF-11 L1508211-06 | 10 | |
| 2206B30-007F MKTF-16 L1508211-07 | 11 | <div><div>7</div>Gl</div> |
| 2206B30-009F DUP-6-21-22 L1508211-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 4500CN E-2016 | 13 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 14 | |
| Al: Accreditations & Locations | 15 | |
| Sc: Sample Chain of Custody | 16 | |

2206B30-001F EB-6-21-22 L1508211-01 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:18 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 08:00
06/23/22 09:00

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2206B30-002F MKTF-46 L1508211-02 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:19 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 08:20
06/23/22 09:00

2206B30-003F MKTF-18R L1508211-03 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:20 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 08:45
06/23/22 09:00

2206B30-004F MKTF-35 L1508211-04 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:21 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 09:05
06/23/22 09:00

2206B30-005F MKTF-38 L1508211-05 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:26 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 09:35
06/23/22 09:00

2206B30-006F MKTF-11 L1508211-06 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:27 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 10:00
06/23/22 09:00

2206B30-007F MKTF-16 L1508211-07 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:28 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 10:20
06/23/22 09:00

2206B30-009F DUP-6-21-22 L1508211-08 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886404 | 1 | 06/30/22 03:47 | 07/01/22 13:29 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/21/22 00:00
06/23/22 09:00

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container for the following samples.

| Lab Sample ID | Project Sample ID | Method |
|-----------------------------|---------------------------------------|---------------|
| L1508211-03 | 2206B30-003F MKTF-18R | 4500CN E-2016 |
| L1508211-05 | 2206B30-005F MKTF-38 | 4500CN E-2016 |
| L1508211-07 | 2206B30-007F MKTF-16 | 4500CN E-2016 |



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:18 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/21/22 08:20

L1508211

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:19 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:20 | WG1886404 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 06/21/22 09:05

L1508211

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:21 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:26 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/21/22 10:00

L1508211

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:27 | WG1886404 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:28 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/21/22 00:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/01/2022 13:29 | WG1886404 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3810093-1 07/01/22 13:02

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1507725-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1507725-03 07/01/22 13:07 • (DUP) R3810093-3 07/01/22 13:08

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 25.1 | P1 | 20 |

L1507860-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1507860-04 07/01/22 13:16 • (DUP) R3810093-6 07/01/22 13:17

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3810093-2 07/01/22 13:03

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.104 | 104 | 87.1-120 | |

L1508211-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508211-04 07/01/22 13:21 • (MS) R3810093-7 07/01/22 13:22 • (MSD) R3810093-8 07/01/22 13:23

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0992 | 0.0942 | 99.2 | 94.2 | 1 | 90.0-110 | | | 5.17 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

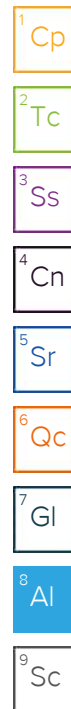
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

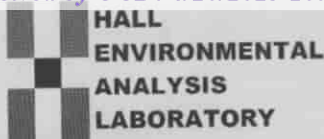
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 1699 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

G036

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|--|--------------|------------------|-------------|-----------------------|-----------------------|---------------------|----------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206B30-001F | EB-6-21-22 | 500AMBHDP | Groundw | 6/21/2022 8:00:00 AM | 1 | Total Cyanide J and MDL 21 |
| 2 | 2206B30-002F | MKTF-46 | 500AMBHDP | Groundw | 6/21/2022 8:20:00 AM | 1 | Total Cyanide J and MDL 22 |
| 3 | 2206B30-003F | MKTF-18R | 500AMBHDP | Groundw | 6/21/2022 8:45:00 AM | 1 | Total Cyanide J and MDL 23 |
| 4 | 2206B30-004F | MKTF-35 | 500AMBHDP | Groundw | 6/21/2022 9:05:00 AM | 1 | Total Cyanide J and MDL 24 |
| 5 | 2206B30-005F | MKTF-38 | 500AMBHDP | Groundw | 6/21/2022 9:35:00 AM | 1 | Total Cyanide J and MDL 25 |
| 6 | 2206B30-006F | MKTF-11 | 500AMBHDP | Groundw | 6/21/2022 10:00:00 AM | 1 | Total Cyanide J and MDL 26 |
| 7 | 2206B30-007F | MKTF-16 | 500AMBHDP | Groundw | 6/21/2022 10:20:00 AM | 1 | Total Cyanide J and MDL 27 |
| 8 | 2206B30-009F | DUP-6-21-22 | 500AMBHDP | Groundw | 6/21/2022 | 1 | Total Cyanide J and MDL 28 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ N If Applicable

COC Signed/Accurate: ☒ N VOA Zero Headspace: ☒ N

Bottles arrive intact: ☒ N Pres. Correct/Check: ☒ N

Correct bottles used: ☒ N

Sufficient volume sent: ☒ N

RAP Screened at 5 mL/hr: ☒ N

 5755 8089 3860
 1.1+0=1.1 JAVTB

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-----------------|---------------|------------------------------|-----------------|-------------|--|--|
| Relinquished By: <i>CRC</i> | Date: 6/22/2022 | Time: 8:32 AM | Received By: <i>M. Smith</i> | Date: 6/22/2022 | Time: 09:00 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68353 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162931 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68353 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162932 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0016 | 0.0030 | 0.002000 | 0 | 80.1 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 97.9 | 50 | 150 | | | J |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0027 | 0.010 | 0.005000 | 0 | 53.6 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 100 | 50 | 150 | | | |
| Vanadium | 0.0098 | 0.050 | 0.01000 | 0 | 97.9 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 115 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68353 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162933 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.47 | 0.0030 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 93.5 | 85 | 115 | | | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0 | 93.0 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.0 | 85 | 115 | | | |
| Nickel | 0.45 | 0.010 | 0.5000 | 0 | 90.9 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.1 | 85 | 115 | | | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0 | 95.3 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.2 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3159952 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3159959 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLLCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3159960 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.5 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.3 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 124 | 50 | 150 | | | |
| Chromium | 0.0064 | 0.0060 | 0.006000 | 0 | 106 | 50 | 150 | | | |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 97.3 | 50 | 150 | | | J |
| Nickel | 0.0062 | 0.010 | 0.005000 | 0 | 123 | 50 | 150 | | | J |
| Silver | 0.0045 | 0.0050 | 0.005000 | 0 | 89.2 | 50 | 150 | | | J |
| Vanadium | 0.0099 | 0.050 | 0.01000 | 0 | 99.1 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 117 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A88979 | | RunNo: 88979 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3159961 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.6 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLCS | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B88979 | | RunNo: 88979 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160008 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0020 | 0.002000 | 0 | 87.2 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 84.9 | 50 | 150 | | | J |
| Chromium | 0.0064 | 0.0060 | 0.006000 | 0 | 107 | 50 | 150 | | | |
| Cobalt | 0.0065 | 0.0060 | 0.006000 | 0 | 108 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.8 | 50 | 150 | | | J |
| Silver | 0.0046 | 0.0050 | 0.005000 | 0 | 91.7 | 50 | 150 | | | J |
| Vanadium | 0.012 | 0.050 | 0.01000 | 0 | 118 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B88979 | | RunNo: 88979 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160009 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 95.5 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2206B30-009EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: DUP-6-21-22 | | Batch ID: B88979 | | RunNo: 88979 | | | | | | |
| Prep Date: | | Analysis Date: 6/23/2022 | | SeqNo: 3160014 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0.03745 | 96.6 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.9 | 70 | 130 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.5 | 70 | 130 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0.003414 | 93.0 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0.004179 | 101 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.007073 | 99.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|--------|----------|------|
| Sample ID: 2206B30-009EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: DUP-6-21-22 | | Batch ID: B88979 | | RunNo: 88979 | | | | | | |
| Prep Date: | | Analysis Date: 6/23/2022 | | SeqNo: 3160015 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0.03745 | 96.2 | 70 | 130 | 0.371 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | 1.37 | 20 | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | 0.859 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 99.0 | 70 | 130 | 0.209 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.2 | 70 | 130 | 0.696 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.2 | 70 | 130 | 0.352 | 20 | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0.003414 | 93.5 | 70 | 130 | 0.483 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.004179 | 99.4 | 70 | 130 | 1.34 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.007073 | 99.4 | 70 | 130 | 0.0642 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68353 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162820 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68353 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162821 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00091 | 0.0010 | 0.001000 | 0 | 91.1 | 50 | 150 | | | J |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 98.1 | 50 | 150 | | | J |
| Lead | 0.00045 | 0.00050 | 0.0005000 | 0 | 89.3 | 50 | 150 | | | J |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 131 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68353 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162822 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.1 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.1 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A88981 | RunNo: 88981 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160067 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A88981 | RunNo: 88981 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160068 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.00099 | 0.0010 | 0.001000 | 0 | 98.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A88981 | RunNo: 88981 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160069 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.6 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68333 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68333 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161261 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-68333 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68333 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161262 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00017 0.00020 0.0001500 | 0 112 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68333 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68333 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161263 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 | 0 102 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 | | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163530 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 | | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163531 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68319 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 68319 | RunNo: 89001 | | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163532 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.088 | 0.010 | 0.1000 | 0 | 87.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68319 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68319 | RunNo: 89001 | | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163533 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 | 0.1000 | 0 | 109 | 70 | 130 | 21.9 | 20 | R |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68348 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173275 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.021 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.6 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68348 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173276 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 81.2 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68348 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173277 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 89.2 | 31.7 | 75.4 | 9.38 | 20 | S |
| Surr: DNOP | 0.021 | | 0.01875 | | 112 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161785 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 98.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161786 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 107 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: W89041 | | RunNo: 89041 | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | SeqNo: 3163698 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 91.2 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 83.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 91.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: W89041 | | RunNo: 89041 | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | SeqNo: 3163699 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: W89041 | RunNo: 89041 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163699 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| Sample ID: 2206b30-002ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: MKTF-46 | Batch ID: W89041 | RunNo: 89041 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3164049 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 91.9 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| 1,1-Dichloroethene | 15 | 1.0 | 20.00 | 0 | 77.5 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 87.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| Sample ID: 2206b30-002amsd | SampType: MSD | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: MKTF-46 | Batch ID: W89041 | RunNo: 89041 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3164052 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.4 | 70 | 130 | 5.75 | 20 | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | 0.862 | 20 | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | 4.43 | 20 | |
| 1,1-Dichloroethene | 15 | 1.0 | 20.00 | 0 | 76.5 | 70 | 130 | 1.30 | 20 | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 96.7 | 70 | 130 | 10.3 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 110 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 92.4 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.0 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 105 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89107 | | RunNo: 89107 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3166436 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.8 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89107 | | RunNo: 89107 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3166437 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 98.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89107 | | RunNo: 89107 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3166470 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89107 | | | RunNo: 89107 | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | | SeqNo: 3166470 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89107 | | | RunNo: 89107 | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | | SeqNo: 3166470 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| Sample ID: mb2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89107 | | | RunNo: 89107 | | | | | | |
| Prep Date: | Analysis Date: 6/29/2022 | | | SeqNo: 3166471 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89107 | | | RunNo: 89107 | | | | | | |
| Prep Date: | Analysis Date: 6/29/2022 | | | SeqNo: 3166471 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: mb2 | | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: PBW | | Batch ID: R89107 | | | RunNo: 89107 | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | | SeqNo: 3166471 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 12 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 100ng lcs | | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: LCSW | | Batch ID: A89138 | | | RunNo: 89138 | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | | SeqNo: 3167495 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 95.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.2 | | 10.00 | | 92.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: mb | | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | |
| Client ID: PBW | | Batch ID: A89138 | | | RunNo: 89138 | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | | SeqNo: 3167508 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.4 | | 10.00 | | 93.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.8 | | 10.00 | | 87.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68332 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68332 | RunNo: 89327 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | SeqNo: 3177340 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 70 | | 200.0 | | 35.2 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 54 | | 200.0 | | 26.9 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 71 | | 200.0 | | 35.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 46.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 40.2 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 62 | | 100.0 | | 61.9 | 48 | 155 | | | |

| Sample ID: lcs-68332 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68332 | RunNo: 89327 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | SeqNo: 3177341 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|-------------|--|--------------------|-----------|------|----------|------|
| Sample ID: lcs-68332 | SampType: LCS | | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
| Client ID: LCSW | Batch ID: 68332 | | | | RunNo: 89327 | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | | | | SeqNo: 3177341 | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 67 | 10 | 100.0 | 0 | 67.4 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 61 | 5.0 | 100.0 | 0 | 60.8 | 15 | 89.8 | | | |
| Phenol | 92 | 20 | 200.0 | 0 | 45.8 | 17 | 61.1 | | | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 55.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 85 | | 200.0 | | 42.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 73 | | 100.0 | | 73.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 68 | | 100.0 | | 68.5 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.0 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----------|-------------|--|--------------------|-----------|------|----------|------|
| Sample ID: lcsd-68332 | SampType: LCSD | | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
| Client ID: LCSS02 | Batch ID: 68332 | | | | RunNo: 89327 | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | | | | SeqNo: 3177342 | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 55 | 10 | 100.0 | 0 | 54.9 | 21.3 | 104 | 20.4 | 45.3 | |
| 1,4-Dichlorobenzene | 50 | 5.0 | 100.0 | 0 | 50.0 | 15 | 89.8 | 19.5 | 39.6 | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.4 | 17 | 61.1 | 20.2 | 42.5 | |
| Pyrene | 78 | 10 | 100.0 | 0 | 77.9 | 61 | 123 | 9.22 | 11.8 | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 62.3 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 57 | | 100.0 | | 57.5 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 52 | | 100.0 | | 52.3 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.1 | 48 | 155 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68332 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68332 | RunNo: 89275 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174738 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 50.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 73 | | 200.0 | | 36.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 84.8 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68332 If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68332 | RunNo: 89275 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174739 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 81 | | 100.0 | | 81.2 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206B30

15-Aug-22

Client: Marathon

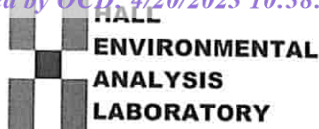
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-68332 If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68332 | | RunNo: 89275 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 7/6/2022 | | SeqNo: 3174739 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 92 | | 200.0 | | 45.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 75 | | 100.0 | | 75.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 95.0 | 72.3 | 147 | | | |

| Sample ID: Icsd-68332 If | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
|---------------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | | Batch ID: 68332 | | | RunNo: 89275 | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 7/6/2022 | | | SeqNo: 3174740 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 1.0 | 2.000 | 0 | 55.0 | 20.2 | 48.4 | 3.70 | 30.1 | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 21.3 | 79.9 | 3.97 | 25.6 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 22.2 | 80.3 | 4.08 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 20.6 | 80.1 | 5.56 | 25 | |
| Acenaphthene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 29.8 | 82.7 | 1.21 | 27.8 | S |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 33.3 | 86 | 2.35 | 26.4 | |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 38.2 | 93.9 | 3.24 | 27.9 | S |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | 1.12 | 25.6 | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 52.9 | 123 | 1.02 | 22.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 89.0 | 51 | 113 | 4.60 | 20 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | 4.04 | 24.1 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 55.3 | 115 | 6.59 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 44.4 | 136 | 3.35 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 31.4 | 165 | 1.10 | 21.1 | |
| Surr: Nitrobenzene-d5 | 84 | | 100.0 | | 83.6 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 79 | | 100.0 | | 79.1 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206B30**

RcptNo: 1

Received By: **Juan Rojas** 6/22/2022 7:20:00 AMCompleted By: **Cheyenne Cason** 6/22/2022 8:27:46 AMReviewed By: **KVG** 6.22.22Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

of preserved
bottles checked
for pH: 168
(2 or 12 unless noted)

Adjusted? yes

Checked by: ju 6/22/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: 0.5ml of H2O3 was added to sample 004D, 006D for pH 2. ju 6/22/22.

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.7 | Good | Yes | | | |
| 2 | 2.2 | Good | Yes | | | |
| 3 | 0.4 | Good | Yes | | | |
| 4 | 5.3 | Good | Yes | | | |

If necessary, samples submitted to H&E Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206C26

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 6 sample(s) on 6/23/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 4:06:48 PM | A89029 |
| Surr: BFB | 98.6 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 4:06:48 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Acetone | 5.3 | 2.5 | 10 | J | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 7:47:00 PM | R89156 |
| Surr: Toluene-d8 | 94.2 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 7:47:00 PM | R89156 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 6/24/2022 9:06:17 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.023 | 0.016 | 0.064 | J | mg/L | 1 | 7/5/2022 7:08:09 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 7:08:09 PM | 68348 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 7:08:09 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: 2-Fluorophenol | 37.2 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: Phenol-d5 | 27.4 | 0 | 28.5-64.7 | S | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 49.6 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: Nitrobenzene-d5 | 47.2 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 42.7 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 79.9 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 6:31:59 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 6:43:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.1 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 48.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 6:43:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 92.7 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 6:43:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:41:38 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:24:40 AM | 68353 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 11:24:40 AM | 68353 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 11:24:40 AM | 68353 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/27/2022 11:24:40 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:33:06 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:15:00 AM

Lab ID: 2206C26-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Vanadium | 0.0021 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| Zinc | 0.0066 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 12:53:35 PM | B88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 2:25:20 PM | B89062 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/27/2022 2:25:20 PM | B89062 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/27/2022 2:25:20 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 2:25:20 PM | B89062 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:39:34 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 4:30:30 PM | A89029 |
| Surr: BFB | 99.2 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 4:30:30 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Methyl tert-butyl ether (MTBE) | 1.3 | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,1-Dichloroethane | 0.80 | 0.27 | 1.0 | J | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Surr: Dibromofluoromethane | 107 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 8:11:00 PM | R89156 |
| Surr: Toluene-d8 | 94.4 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 8:11:00 PM | R89156 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/24/2022 9:36:26 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.053 | 0.016 | 0.064 | J | mg/L | 1 | 7/5/2022 7:31:56 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 7:31:56 PM | 68348 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 7:31:56 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: 2-Fluorophenol | 43.3 | 0 | 29.4-87.7 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: Phenol-d5 | 33.2 | 0 | 28.5-64.7 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 44.8 | 0 | 18.6-129 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: Nitrobenzene-d5 | 56.3 | 0 | 36.9-103 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 51.4 | 0 | 38.1-99.9 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 75.3 | 0 | 48-155 | | %Rec | 1 | 7/7/2022 7:15:58 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 11 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 7:36:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.6 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 62.4 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 7:36:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 92.1 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 7:36:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.29 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Chromium | 0.0048 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Cobalt | 0.0057 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Nickel | 0.0093 | 0.0053 | 0.010 | J | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Vanadium | 0.027 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| Zinc | 0.024 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:43:15 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/27/2022 11:49:10 AM | 68353 |
| Arsenic | 0.0024 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/27/2022 11:49:10 AM | 68353 |
| Lead | 0.012 | 0.00031 | 0.0025 | | mg/L | 5 | 6/27/2022 11:49:10 AM | 68353 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/27/2022 11:49:10 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:45:58 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 8:35:00 AM

Lab ID: 2206C26-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.047 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Nickel | 0.013 | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Silver | 0.0056 | 0.0013 | 0.0050 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Vanadium | 0.013 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| Zinc | 0.018 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 12:58:13 PM | B88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/29/2022 2:28:26 PM | C89140 |
| Arsenic | 0.00092 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/29/2022 2:28:26 PM | C89140 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/29/2022 2:28:26 PM | C89140 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/29/2022 2:28:26 PM | C89140 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:48:07 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.36 | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 4:54:19 PM | A89029 |
| Surr: BFB | 99.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 4:54:19 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 0.51 | 0.45 | 2.0 | J | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Ethylbenzene | ND | 0.43 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Methyl tert-butyl ether (MTBE) | 500 | 3.9 | 10 | | µg/L | 10 | 7/1/2022 6:47:16 PM | A89211 |
| 1,2,4-Trimethylbenzene | ND | 0.24 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 1,2-Dichloroethane (EDC) | 17 | 0.51 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| cis-1,2-DCE | 2.8 | 0.78 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 1,1-Dichloroethane | 38 | 0.55 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 1,1-Dichloroethene | 43 | 0.40 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Isopropylbenzene | ND | 0.37 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| n-Propylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| sec-Butylbenzene | ND | 0.29 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| 1,1,1-Trichloroethane | 2.0 | 0.60 | 2.0 | J | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Trichloroethene (TCE) | 4.7 | 0.41 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Xylenes, Total | ND | 0.74 | 3.0 | | µg/L | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 2 | 6/30/2022 9:20:00 PM | R89156 |
| Surr: Toluene-d8 | 92.3 | 0 | 70-130 | | %Rec | 2 | 6/30/2022 9:20:00 PM | R89156 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/24/2022 10:06:45 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.21 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 8:19:43 PM | 68348 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 8:19:43 PM | 68348 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 8:19:43 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 29.4-87.7 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: Phenol-d5 | 36.0 | 0 | 28.5-64.7 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: 2,4,6-Tribromophenol | 48.2 | 0 | 18.6-129 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: Nitrobenzene-d5 | 59.2 | 0 | 36.9-103 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: 2-Fluorobiphenyl | 50.9 | 0 | 38.1-99.9 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| Surr: 4-Terphenyl-d14 | 72.3 | 0 | 48-155 | | %Rec | 1 | 7/8/2022 11:23:16 AM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 79 | 0.11 | 1.0 | E | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 9:32:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.2 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 57.4 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 9:32:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 80.6 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 9:32:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.45 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Beryllium | 0.0022 | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Chromium | 0.014 | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Cobalt | 0.0077 | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Nickel | 0.016 | 0.0053 | 0.010 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Vanadium | 0.036 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| Zinc | 0.034 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:44:39 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 11:34:28 AM | 68353 |
| Arsenic | 0.0027 | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 11:34:28 AM | 68353 |
| Lead | 0.015 | 0.000061 | 0.00050 | * | mg/L | 1 | 6/27/2022 11:34:28 AM | 68353 |
| Selenium | 0.0022 | 0.00037 | 0.0010 | | mg/L | 1 | 6/27/2022 11:34:28 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:50:15 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.11 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Nickel | 0.0058 | 0.0033 | 0.010 | J | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Vanadium | 0.0067 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| Zinc | 0.0079 | 0.0032 | 0.010 | J | mg/L | 1 | 6/23/2022 1:02:40 PM | B88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 2:30:43 PM | B89062 |
| Arsenic | 0.00064 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/27/2022 2:30:43 PM | B89062 |
| Lead | 0.000088 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/27/2022 2:30:43 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 2:30:43 PM | B89062 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:52:24 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022 9:00:00 AM

Lab ID: 2206C26-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Acetone | 5.7 | 2.5 | 10 | J | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 9:43:00 PM | R89156 |
| Surr: Toluene-d8 | 92.9 | 0 | 70-130 | | %Rec | 1 | 6/30/2022 9:43:00 PM | R89156 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 5:18:00 PM | A89029 |
| Surr: BFB | 97.6 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 5:18:00 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Methyl tert-butyl ether (MTBE) | 1.4 | 0.39 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,1-Dichloroethane | 0.97 | 0.27 | 1.0 | J | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 6:20:05 PM | A89211 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 6:20:05 PM | A89211 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/24/2022 10:36:57 AM | 68319 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.53 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 8:43:31 PM | 68348 |
| Motor Oil Range Organics (MRO) | 1.1 | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 8:43:31 PM | 68348 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 8:43:31 PM | 68348 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 29.4-87.7 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: Phenol-d5 | 37.7 | 0 | 28.5-64.7 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: 2,4,6-Tribromophenol | 37.4 | 0 | 18.6-129 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: Nitrobenzene-d5 | 57.8 | 0 | 36.9-103 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 68.3 | 0 | 48-155 | | %Rec | 1 | 7/8/2022 12:05:17 PM | 68332 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 11 | 0.11 | 1.0 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/6/2022 10:23:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.6 | 0 | 31.6-100 | | %Rec | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Surr: 2-Fluorobiphenyl | 61.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/6/2022 10:23:00 PM | 68332 |
| Surr: 4-Terphenyl-d14 | 89.8 | 0 | 72.3-147 | | %Rec | 1 | 7/6/2022 10:23:00 PM | 68332 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.26 | 0.0016 | 0.0030 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Chromium | 0.0032 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Cobalt | 0.0076 | 0.0035 | 0.0060 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Nickel | 0.010 | 0.0053 | 0.010 | J | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Vanadium | 0.025 | 0.0035 | 0.050 | J | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| Zinc | 0.019 | 0.0039 | 0.010 | | mg/L | 1 | 6/27/2022 9:46:02 AM | 68353 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/27/2022 11:51:37 AM | 68353 |
| Arsenic | 0.0017 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/27/2022 11:51:37 AM | 68353 |
| Lead | 0.0099 | 0.00031 | 0.0025 | | mg/L | 5 | 6/27/2022 11:51:37 AM | 68353 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/27/2022 11:51:37 AM | 68353 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:54:32 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-22-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/22/2022

Lab ID: 2206C26-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.050 | 0.0011 | 0.0020 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Nickel | 0.011 | 0.0033 | 0.010 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Silver | 0.0060 | 0.0013 | 0.0050 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Vanadium | 0.013 | 0.0017 | 0.050 | J | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 6/23/2022 1:07:01 PM | B88979 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/29/2022 2:31:07 PM | C89140 |
| Arsenic | 0.00080 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/29/2022 2:31:07 PM | C89140 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/29/2022 2:31:07 PM | C89140 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/29/2022 2:31:07 PM | C89140 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/24/2022 12:56:41 PM | 68334 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206C26-006A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206C26

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206C26-006A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Surr: Dibromofluoromethane | 112 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 5:52:54 PM | A89211 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 7/1/2022 5:52:54 PM | A89211 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |



ANALYTICAL REPORT

July 06, 2022

Hall Environmental Analysis Laboratory

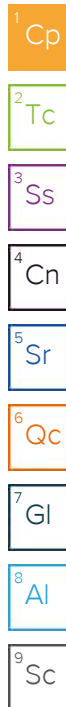
Sample Delivery Group: L1508738

Samples Received: 06/24/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2206C26-001F EB-6-22-22 L1508738-01 | 5 | |
| 2206C26-002F MKTF-40 L1508738-02 | 6 | ⁴ Cn |
| 2206C26-003F MKTF-31 L1508738-03 | 7 | ⁵ Sr |
| 2206C26-005F DUP-6-21-22 L1508738-04 | 8 | |
| Qc: Quality Control Summary | 9 | ⁶ Qc |
| Wet Chemistry by Method 4500CN E-2016 | 9 | |
| Gl: Glossary of Terms | 11 | ⁷ Gl |
| Al: Accreditations & Locations | 12 | ⁸ Al |
| Sc: Sample Chain of Custody | 13 | ⁹ Sc |

2206C26-001F EB-6-22-22 L1508738-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 06/22/22 08:15 | 06/24/22 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888356 | 1 | 07/03/22 11:36 | 07/05/22 00:22 | CAT | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

2206C26-002F MKTF-40 L1508738-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 06/22/22 08:35 | 06/24/22 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888356 | 1 | 07/03/22 11:36 | 07/05/22 00:23 | CAT | Mt. Juliet, TN |

4
Cn

5
Sr

2206C26-003F MKTF-31 L1508738-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 06/22/22 09:00 | 06/24/22 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888360 | 1 | 07/02/22 17:50 | 07/05/22 01:25 | CAT | Mt. Juliet, TN |

6
Qc

7
Gl

8
Al

2206C26-005F DUP-6-21-22 L1508738-04 WW

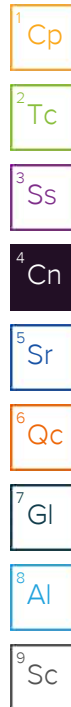
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 06/22/22 00:00 | 06/24/22 08:45 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888360 | 1 | 07/02/22 17:50 | 07/05/22 01:26 | CAT | Mt. Juliet, TN |

9
Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/05/2022 00:22 | WG1888356 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0128 | | 0.00500 | 1 | 07/05/2022 00:23 | WG1888356 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00830 | | 0.00500 | 1 | 07/05/2022 01:25 | WG1888360 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0129 | | 0.00500 | 1 | 07/05/2022 01:26 | WG1888360 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3810639-1 07/04/22 23:52

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|---------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1507941-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1507941-03 07/05/22 00:05 • (DUP) R3810639-5 07/05/22 00:06

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1508166-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1508166-04 07/05/22 00:10 • (DUP) R3810639-8 07/05/22 00:11

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | ND | 0.00567 | 1 | 26.3 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3810639-2 07/04/22 23:53

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Cyanide | 0.100 | 0.0943 | 94.3 | 87.1-120 | |

L1507934-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507934-03 07/05/22 00:00 • (MS) R3810639-3 07/05/22 00:01 • (MSD) R3810639-4 07/05/22 00:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 0.100 | ND | 0.0727 | 0.0887 | 72.7 | 88.7 | 1 | 90.0-110 | J6 | J6 | 19.8 | 20 |

L1508166-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508166-03 07/05/22 00:07 • (MS) R3810639-6 07/05/22 00:08 • (MSD) R3810639-7 07/05/22 00:09

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Cyanide | 0.100 | ND | 0.0982 | 0.0987 | 93.3 | 93.8 | 1 | 90.0-110 | | | 0.508 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1508738-03.04

Method Blank (MB)

(MB) R3810641-1 07/05/22 00:55

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1507944-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1507944-10 07/05/22 01:01 • (DUP) R3810641-3 07/05/22 01:02

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1507944-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1507944-14 07/05/22 01:10 • (DUP) R3810641-6 07/05/22 01:11

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3810641-2 07/05/22 00:56

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.101 | 101 | 87.1-120 | |

L1507944-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507944-11 07/05/22 01:03 • (MS) R3810641-4 07/05/22 01:04 • (MSD) R3810641-5 07/05/22 01:07

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0968 | 0.0926 | 96.8 | 92.6 | 1 | 90.0-110 | | | 4.44 | 20 |

L1507944-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507944-16 07/05/22 01:12 • (MS) R3810641-7 07/05/22 01:13 • (MSD) R3810641-8 07/05/22 01:14

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0773 | 0.0953 | 77.3 | 95.3 | 1 | 90.0-110 | J6 | J3 | 20.9 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

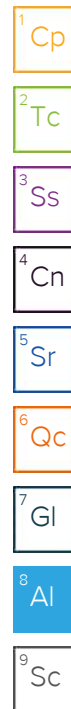
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

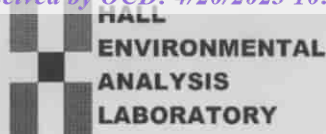
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

F044

| | | | | | | | |
|---|--------------|-------------------------|---------------------|------------------------------|----------------------|----------------------------|----------------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206C26-001F | EB-6-22-22 | 500AMBHDP
F-MAQW | Groundw
atar | 6/22/2022 8:15:00 AM | 1 | Total Cyanide J and MDL <i>u</i> |
| 2 | 2206C26-002F | MKTF-40 | 500AMBHDP
F-MAQW | Groundw
atar | 6/22/2022 8:35:00 AM | 1 | Total Cyanide J and MDL <i>u</i> |
| 3 | 2206C26-003F | MKTF-31 | 500AMBHDP
F-MAQW | Groundw
atar | 6/22/2022 9:00:00 AM | 1 | Total Cyanide J and MDL <i>u</i> |
| 4 | 2206C26-005F | DUP-6-21-22 | 500AMBHDP
F-MAQW | Groundw
atar | 6/22/2022 | 1 | Total Cyanide J and MDL <i>u</i> |

U508738

ANALYTICAL COMMENTS

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 B&B Screen <0.5 mg/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|------------------------|----------------------|---------------------------------|----------------------|-------------------|--|
| Relinquished By: <i>CMC</i> | Date: 6/23/2022 | Time: 7:49 AM | Received By: <i>[Signature]</i> | Date: 6/24/22 | Time: 8:45 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 0.5 to 0.5 °C Attempt to Cool? _____
DEA7
Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68353 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162931 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-68353 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162932 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0016 | 0.0030 | 0.002000 | 0 | 80.1 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 97.9 | 50 | 150 | | | J |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0027 | 0.010 | 0.005000 | 0 | 53.6 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 100 | 50 | 150 | | | |
| Vanadium | 0.0098 | 0.050 | 0.01000 | 0 | 97.9 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 115 | 50 | 150 | | | |

| Sample ID: LCS-68353 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68353 | RunNo: 89052 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/27/2022 | SeqNo: 3162933 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.47 | 0.0030 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 93.5 | 85 | 115 | | | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0 | 93.0 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 92.0 | 85 | 115 | | | |
| Nickel | 0.45 | 0.010 | 0.5000 | 0 | 90.9 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.1 | 85 | 115 | | | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0 | 95.3 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.2 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2206C26-005DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: DUP-6-22-22 | | Batch ID: 68353 | | RunNo: 89052 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162952 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.69 | 0.0030 | 0.5000 | 0.2572 | 85.6 | 70 | 130 | | | |
| Beryllium | 0.47 | 0.0020 | 0.5000 | 0 | 94.0 | 70 | 130 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.6 | 70 | 130 | | | |
| Chromium | 0.44 | 0.0060 | 0.5000 | 0.003164 | 88.4 | 70 | 130 | | | |
| Cobalt | 0.43 | 0.0060 | 0.5000 | 0.007584 | 84.0 | 70 | 130 | | | |
| Nickel | 0.42 | 0.010 | 0.5000 | 0.009985 | 82.2 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 70 | 130 | | | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0.02497 | 91.3 | 70 | 130 | | | |
| Zinc | 0.46 | 0.010 | 0.5000 | 0.01919 | 88.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|--------|----------|------|
| Sample ID: 2206C26-005DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: DUP-6-22-22 | | Batch ID: 68353 | | RunNo: 89052 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162953 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.68 | 0.0030 | 0.5000 | 0.2572 | 85.4 | 70 | 130 | 0.139 | 20 | |
| Beryllium | 0.47 | 0.0020 | 0.5000 | 0 | 94.0 | 70 | 130 | 0.0255 | 20 | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.3 | 70 | 130 | 0.729 | 20 | |
| Chromium | 0.45 | 0.0060 | 0.5000 | 0.003164 | 89.4 | 70 | 130 | 1.18 | 20 | |
| Cobalt | 0.43 | 0.0060 | 0.5000 | 0.007584 | 84.6 | 70 | 130 | 0.761 | 20 | |
| Nickel | 0.43 | 0.010 | 0.5000 | 0.009985 | 83.5 | 70 | 130 | 1.52 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 70 | 130 | 0.731 | 20 | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0.02497 | 92.5 | 70 | 130 | 1.23 | 20 | |
| Zinc | 0.46 | 0.010 | 0.5000 | 0.01919 | 89.0 | 70 | 130 | 0.233 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3159952 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160008 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0020 | 0.002000 | 0 | 87.2 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 84.9 | 50 | 150 | | | J |
| Chromium | 0.0064 | 0.0060 | 0.006000 | 0 | 107 | 50 | 150 | | | |
| Cobalt | 0.0065 | 0.0060 | 0.006000 | 0 | 108 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.8 | 50 | 150 | | | J |
| Silver | 0.0046 | 0.0050 | 0.005000 | 0 | 91.7 | 50 | 150 | | | J |
| Vanadium | 0.012 | 0.050 | 0.01000 | 0 | 118 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B88979 | RunNo: 88979 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160009 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 95.5 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68353 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162820 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68353 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162821 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00091 | 0.0010 | 0.001000 | 0 | 91.1 | 50 | 150 | | | J |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 98.1 | 50 | 150 | | | J |
| Lead | 0.00045 | 0.00050 | 0.0005000 | 0 | 89.3 | 50 | 150 | | | J |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 131 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68353 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68353 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162822 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.1 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.1 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: B89062 | | RunNo: 89062 | | | | | | |
| Prep Date: | | Analysis Date: 6/27/2022 | | SeqNo: 3163459 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------|--------------------------|-----------|---------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B89062 | | RunNo: 89062 | | | | | | |
| Prep Date: | | Analysis Date: 6/27/2022 | | SeqNo: 3163460 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00098 | 0.0010 | 0.001000 | 0 | 97.5 | 50 | 150 | | | J |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|--|------|----------|--------------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: B89062 | | RunNo: 89062 | | | | | | |
| Prep Date: | | Analysis Date: 6/27/2022 | | SeqNo: 3163461 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.5 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-----------|-------------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: C89140 | | | RunNo: 89140 | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | | SeqNo: 3167568 | | | Units: mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: C89140 | | RunNo: 89140 | | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | SeqNo: 3167569 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C89140 | RunNo: 89140 | | | | | | | | |
| Prep Date: | Analysis Date: 6/29/2022 | SeqNo: 3167569 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Lead | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Selenium | 0.00074 | 0.0010 | 0.001000 | 0 | 74.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C89140 | RunNo: 89140 | | | | | | | | |
| Prep Date: | Analysis Date: 6/29/2022 | SeqNo: 3167570 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.6 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 100 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-68334 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68334 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161264 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-68334 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68334 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161265 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00017 0.00020 0.0001500 | 0 115 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-68334 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68334 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161266 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0048 0.00020 0.005000 | 0 95.3 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2206C26-001DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-6-22-22 | Batch ID: 68334 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161292 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 | 0 103 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2206C26-001DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-6-22-22 | Batch ID: 68334 | RunNo: 89015 |
| Prep Date: 6/24/2022 | Analysis Date: 6/24/2022 | SeqNo: 3161293 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 | 0 101 75 125 1.48 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163530 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163531 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-68319 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163532 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.088 | 0.010 0.1000 0 87.8 70 130 |

| | | |
|-----------------------|--------------------------|--|
| Sample ID: LCSD-68319 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163533 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 109 70 130 21.9 20 R |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2206C26-005BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: DUP-6-22-22 | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/24/2022 | SeqNo: 3163573 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.092 | 0.0093 0.09309 0 99.1 65 135 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68348 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 68348 | RunNo: 89239 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173275 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.021 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.6 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68348 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 68348 | RunNo: 89239 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173276 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 81.2 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68348 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68348 | RunNo: 89239 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173277 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 89.2 | 31.7 | 75.4 | 9.38 | 20 | S |
| Surr: DNOP | 0.021 | | 0.01875 | | 112 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161785 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 98.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161786 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 107 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R89156 | | RunNo: 89156 | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | | SeqNo: 3169606 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 94.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 96.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 94.4 | 70 | 130 | | | |

| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89156 | | RunNo: 89156 | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | | SeqNo: 3169683 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R89156 | RunNo: 89156 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3169683 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 92.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206C26-002ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: MKTF-40 | Batch ID: R89156 | RunNo: 89156 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3169698 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 112 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206C26-002amsd | SampType: MSD | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: MKTF-40 | Batch ID: R89156 | RunNo: 89156 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3169699 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | 2.83 | 20 | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.6 | 70 | 130 | 4.60 | 20 | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | 1.14 | 20 | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.7 | 70 | 130 | 11.3 | 20 | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | 2.88 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 112 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.3 | | 10.00 | | 92.6 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A89211 | | RunNo: 89211 | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | SeqNo: 3171144 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A89211 | | RunNo: 89211 | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | SeqNo: 3171177 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A89211 | | | RunNo: 89211 | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | | SeqNo: 3171177 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A89211 | | | RunNo: 89211 | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | | SeqNo: 3171177 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.1 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68332 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68332 | RunNo: 89327 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | SeqNo: 3177340 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 70 | | 200.0 | | 35.2 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 54 | | 200.0 | | 26.9 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 71 | | 200.0 | | 35.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 46.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 40.2 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 62 | | 100.0 | | 61.9 | 48 | 155 | | | |

| Sample ID: lcs-68332 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68332 | RunNo: 89327 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | SeqNo: 3177341 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| Sample ID: lcs-68332 | SampType: LCS | | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
|-----------------------------|--------------------------------|-----|-----------|-------------|--|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68332 | | | | RunNo: 89327 | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | | | | SeqNo: 3177341 | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 67 | 10 | 100.0 | 0 | 67.4 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 61 | 5.0 | 100.0 | 0 | 60.8 | 15 | 89.8 | | | |
| Phenol | 92 | 20 | 200.0 | 0 | 45.8 | 17 | 61.1 | | | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 55.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 85 | | 200.0 | | 42.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 73 | | 100.0 | | 73.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 68 | | 100.0 | | 68.5 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.0 | 48 | 155 | | | |

| Sample ID: lcsd-68332 | SampType: LCSD | | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
|------------------------------|--------------------------------|-----|-----------|-------------|--|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68332 | | | | RunNo: 89327 | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/7/2022 | | | | SeqNo: 3177342 | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 55 | 10 | 100.0 | 0 | 54.9 | 21.3 | 104 | 20.4 | 45.3 | |
| 1,4-Dichlorobenzene | 50 | 5.0 | 100.0 | 0 | 50.0 | 15 | 89.8 | 19.5 | 39.6 | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.4 | 17 | 61.1 | 20.2 | 42.5 | |
| Pyrene | 78 | 10 | 100.0 | 0 | 77.9 | 61 | 123 | 9.22 | 11.8 | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 62.3 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 57 | | 100.0 | | 57.5 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 52 | | 100.0 | | 52.3 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.1 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68332 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68332 | RunNo: 89275 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174738 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 50.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 73 | | 200.0 | | 36.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 84.8 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68332 lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68332 | RunNo: 89275 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174739 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 81 | | 100.0 | | 81.2 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206C26

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-68332 If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68332 | | RunNo: 89275 | | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 7/6/2022 | | SeqNo: 3174739 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 92 | | 200.0 | | 45.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 75 | | 100.0 | | 75.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 95.0 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: Icsd-68332 If | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | | Batch ID: 68332 | | | RunNo: 89275 | | | | | |
| Prep Date: 6/24/2022 | | Analysis Date: 7/6/2022 | | | SeqNo: 3174740 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 1.0 | 2.000 | 0 | 55.0 | 20.2 | 48.4 | 3.70 | 30.1 | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 21.3 | 79.9 | 3.97 | 25.6 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 22.2 | 80.3 | 4.08 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 20.6 | 80.1 | 5.56 | 25 | |
| Acenaphthene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 29.8 | 82.7 | 1.21 | 27.8 | S |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 33.3 | 86 | 2.35 | 26.4 | |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 38.2 | 93.9 | 3.24 | 27.9 | S |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | 1.12 | 25.6 | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 52.9 | 123 | 1.02 | 22.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 89.0 | 51 | 113 | 4.60 | 20 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | 4.04 | 24.1 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 55.3 | 115 | 6.59 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 44.4 | 136 | 3.35 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 31.4 | 165 | 1.10 | 21.1 | |
| Surr: Nitrobenzene-d5 | 84 | | 100.0 | | 83.6 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 79 | | 100.0 | | 79.1 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206C26**

RcptNo: 1

Received By: **Cheyenne Cason** 6/23/2022 7:20:00 AMCompleted By: **Cheyenne Cason** 6/23/2022 7:56:45 AMReviewed By: *jr 6/23/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 8 4
(<2) or ≥ 12 unless noted)

Adjusted? NOChecked by: KPG 6-22-226-23-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.1 | Good | Yes | | | |
| 2 | 0.9 | Good | Yes | | | |



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

8500 26TH AVENUE, SUITE 100, FORT COLLINS, CO 80501



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 21, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206E09

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/24/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:00:00 AM

Lab ID: 2206E09-001

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/5/2022 10:54:17 PM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.031 | 0.016 | 0.064 | J | mg/L | 1 | 7/9/2022 6:28:30 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 6:28:30 PM | 68464 |
| Surr: DNOP | 111 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 6:28:30 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.019 | 0.0090 | 0.050 | J | mg/L | 1 | 6/28/2022 7:29:39 PM | A89090 |
| Surr: BFB | 109 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 7:29:39 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| Zinc | 0.0053 | 0.0032 | 0.010 | J | mg/L | 1 | 6/27/2022 4:09:36 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| Zinc | 0.0046 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:36:31 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 2:36:05 PM | B89062 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/27/2022 2:36:05 PM | B89062 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/27/2022 2:36:05 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 2:36:05 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/30/2022 1:27:11 PM | 68406 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/30/2022 1:27:11 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:00:00 AM

Lab ID: 2206E09-001

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/30/2022 1:27:11 PM | 68406 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/30/2022 1:27:11 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:23:21 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:25:32 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: 2-Fluorophenol | 59.4 | 0 | 29.4-87.7 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: Phenol-d5 | 43.7 | 0 | 28.5-64.7 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: 2,4,6-Tribromophenol | 67.9 | 0 | 18.6-129 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: Nitrobenzene-d5 | 76.7 | 0 | 36.9-103 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 72.6 | 0 | 38.1-99.9 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 95.7 | 0 | 48-155 | | %Rec | 1 | 7/6/2022 6:56:54 PM | 68408 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Page 2 of 65

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:00:00 AM

Lab ID: 2206E09-001

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Surr: Nitrobenzene-d5 | 80.7 | 0 | 31.6-100 | | %Rec | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 78.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/5/2022 9:18:00 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 117 | 0 | 72.3-147 | | %Rec | 1 | 7/5/2022 9:18:00 PM | 68408 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Toluene | 0.23 | 0.20 | 1.0 | J | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Acetone | 4.9 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Chloromethane | 0.60 | 0.41 | 3.0 | J | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Xylenes, Total | 0.64 | 0.37 | 1.5 | J | µg/L | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:14:31 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

| | | | | | |
|---------------------------------------|--|------------------|---------------------------------------|--|--|
| CLIENT: Marathon | | | Client Sample ID: EB-6-24-22 | | |
| Project: 2022 GW Sampling 2nd Quarter | | | Collection Date: 6/24/2022 8:00:00 AM | | |
| Lab ID: 2206E09-001 | | Matrix: GROUNDWA | Received Date: 6/24/2022 2:57:00 PM | | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 110 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:14:31 PM | R89248 |
| Surr: Toluene-d8 | 99.0 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:14:31 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:30:00 AM

Lab ID: 2206E09-002

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|---------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 7/5/2022 11:24:54 PM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.19 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 6:52:22 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 6:52:22 PM | 68464 |
| Surr: DNOP | 95.6 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 6:52:22 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.046 | 0.0090 | 0.050 | J | mg/L | 1 | 6/28/2022 7:53:12 PM | A89090 |
| Surr: BFB | 105 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 7:53:12 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.055 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Nickel | 0.031 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Silver | 0.0062 | 0.0013 | 0.0050 | | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Vanadium | 0.0025 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| Zinc | 0.0084 | 0.0032 | 0.010 | J | mg/L | 1 | 6/27/2022 4:14:21 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Nickel | 0.035 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/30/2022 5:26:13 PM | 68406 |
| Vanadium | 0.0087 | 0.0035 | 0.050 | J | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| Zinc | 0.0068 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:38:44 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/29/2022 2:55:20 PM | C89140 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 6/29/2022 2:55:20 PM | C89140 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/29/2022 2:55:20 PM | C89140 |
| Selenium | 0.0018 | 0.0017 | 0.0050 | J | mg/L | 5 | 6/29/2022 2:55:20 PM | C89140 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/30/2022 2:38:44 PM | 68406 |
| Arsenic | 0.0010 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/30/2022 2:38:44 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:30:00 AM

Lab ID: 2206E09-002

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | 0.0025 | 0.00031 | 0.0025 | | mg/L | 5 | 6/30/2022 2:38:44 PM | 68406 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/30/2022 2:38:44 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:27:39 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:29:47 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: 2-Fluorophenol | 54.7 | 0 | 29.4-87.7 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: Phenol-d5 | 42.8 | 0 | 28.5-64.7 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: 2,4,6-Tribromophenol | 64.2 | 0 | 18.6-129 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: Nitrobenzene-d5 | 73.6 | 0 | 36.9-103 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 73.2 | 0 | 38.1-99.9 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 90.4 | 0 | 48-155 | | %Rec | 1 | 7/6/2022 7:40:41 PM | 68408 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 8.4 | 0.11 | 1.0 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 8:30:00 AM

Lab ID: 2206E09-002

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: DAM | | | | | | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Surr: Nitrobenzene-d5 | 79.6 | 0 | 31.6-100 | | %Rec | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 76.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/5/2022 10:08:00 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 96.0 | 0 | 72.3-147 | | %Rec | 1 | 7/5/2022 10:08:00 PM | 68408 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|--------|---|------|---|---------------------|--------|
| Benzene | 0.55 | 0.23 | 1.0 | J | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 39 | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,2-Dichloroethane (EDC) | 0.78 | 0.25 | 1.0 | J | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,1-Dichloroethane | 1.6 | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,1-Dichloroethene | 0.87 | 0.20 | 1.0 | J | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:41:41 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

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CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206E09-002

Client Sample ID: MKTF-27

Collection Date: 6/24/2022 8:30:00 AM

Received Date: 6/24/2022 2:57:00 PM

Matrix: GROUNDWA

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:41:41 PM | R89248 |
| Surr: Toluene-d8 | 97.5 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 1:41:41 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:00:00 AM

Lab ID: 2206E09-003

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/5/2022 11:40:11 PM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.19 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 7:16:13 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 7:16:13 PM | 68464 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 7:16:13 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 9:03:46 PM | A89090 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 9:03:46 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.10 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Nickel | 0.0059 | 0.0033 | 0.010 | J | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Silver | 0.0022 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Vanadium | 0.0042 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| Zinc | 0.0090 | 0.0032 | 0.010 | J | mg/L | 1 | 6/27/2022 4:18:46 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.20 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Chromium | 0.0021 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Nickel | 0.0090 | 0.0053 | 0.010 | J | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Vanadium | 0.012 | 0.0035 | 0.050 | J | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| Zinc | 0.018 | 0.0039 | 0.010 | | mg/L | 1 | 6/29/2022 9:40:44 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 2:49:32 PM | B89062 |
| Arsenic | 0.00084 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/27/2022 2:49:32 PM | B89062 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/27/2022 2:49:32 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 2:49:32 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/30/2022 1:32:05 PM | 68406 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 6/30/2022 1:32:05 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:00:00 AM

Lab ID: 2206E09-003

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|-------|---------------------|----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | Analyst: bcv | | |
| Lead | 0.0057 | 0.00031 | 0.0025 | | mg/L | 5 | 6/30/2022 2:41:10 PM | 68406 |
| Selenium | 0.0013 | 0.00037 | 0.0010 | | mg/L | 1 | 6/30/2022 1:32:05 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | Analyst: VP | | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:31:54 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | Analyst: VP | | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:38:17 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | Analyst: DAM | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: 2-Fluorophenol | 62.6 | 0 | 29.4-87.7 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: Phenol-d5 | 46.8 | 0 | 28.5-64.7 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: 2,4,6-Tribromophenol | 75.2 | 0 | 18.6-129 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: Nitrobenzene-d5 | 77.5 | 0 | 36.9-103 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 73.4 | 0 | 38.1-99.9 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 99.3 | 0 | 48-155 | | %Rec | 1 | 7/6/2022 8:24:22 PM | 68408 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | 0.78 | 0.11 | 1.0 | J | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:00:00 AM

Lab ID: 2206E09-003

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: DAM | | | | | | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Surr: Nitrobenzene-d5 | 83.6 | 0 | 31.6-100 | | %Rec | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Surr: 2-Fluorobiphenyl | 80.5 | 0 | 26.7-90.1 | | %Rec | 1 | 7/5/2022 10:56:00 PM | 68408 |
| Surr: 4-Terphenyl-d14 | 94.0 | 0 | 72.3-147 | | %Rec | 1 | 7/5/2022 10:56:00 PM | 68408 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|--------|---|------|---|---------------------|--------|
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 0.70 | 0.39 | 1.0 | J | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Acetone | 2.7 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 2:08:53 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

| | | | |
|---------------------------------------|------------------|---------------------------------------|--|
| CLIENT: Marathon | | Client Sample ID: MKTF-28 | |
| Project: 2022 GW Sampling 2nd Quarter | | Collection Date: 6/24/2022 9:00:00 AM | |
| Lab ID: 2206E09-003 | Matrix: GROUNDWA | Received Date: 6/24/2022 2:57:00 PM | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 2:08:53 PM | R89248 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 2:08:53 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:25:00 AM

Lab ID: 2206E09-004

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/5/2022 11:55:28 PM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 1.7 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 7:40:07 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 7:40:07 PM | 68464 |
| Surr: DNOP | 85.5 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 7:40:07 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 4.2 | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 9:27:18 PM | A89090 |
| Surr: BFB | 354 | 0 | 70-130 | S | %Rec | 1 | 6/28/2022 9:27:18 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 4.9 | 0.011 | 0.020 | * | mg/L | 10 | 6/30/2022 10:03:55 AM | A89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Nickel | 0.063 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Silver | 0.0028 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Vanadium | 0.0025 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 6/27/2022 4:23:05 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: ELS | |
| Barium | 4.4 | 0.016 | 0.030 | * | mg/L | 10 | 7/7/2022 11:31:28 AM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Nickel | 0.064 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Silver | 0.0020 | 0.0018 | 0.0050 | J | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| Zinc | 0.0048 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:42:43 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 2:57:38 PM | B89062 |
| Arsenic | 0.0017 | 0.00012 | 0.0010 | | mg/L | 1 | 6/27/2022 2:57:38 PM | B89062 |
| Lead | 0.00025 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/27/2022 2:57:38 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 2:57:38 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/30/2022 1:34:31 PM | 68406 |
| Arsenic | 0.0027 | 0.00013 | 0.0010 | | mg/L | 1 | 6/30/2022 1:34:31 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:25:00 AM

Lab ID: 2206E09-004

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|-------|----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | 0.0015 | 0.000061 | 0.00050 | | mg/L | 1 | 6/30/2022 1:34:31 PM | 68406 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/30/2022 1:34:31 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:40:24 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:42:32 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 1-Methylnaphthalene | 31 | 4.3 | 5.0 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Phenol | 52 | 18 | 20 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: 2-Fluorophenol | 59.5 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: Phenol-d5 | 44.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: 2,4,6-Tribromophenol | 67.7 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: Nitrobenzene-d5 | 76.8 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: 2-Fluorobiphenyl | 66.1 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| Surr: 4-Terphenyl-d14 | 82.9 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 9:34:17 AM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 3.5 | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Naphthalene | 16 | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| 2-Methylnaphthalene | 6.3 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Acenaphthene | 3.0 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Fluorene | 2.6 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Phenanthrene | 0.18 | 0.16 | 0.30 | J | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Anthracene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:25:00 AM

Lab ID: 2206E09-004

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: TOM | | | | | | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 66.0 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 57.3 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 1:39:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 74.1 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 1:39:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|--------|---|------|----|---------------------|--------|
| Benzene | 1300 | 4.5 | 20 | | µg/L | 20 | 7/5/2022 2:36:08 PM | R89248 |
| Toluene | 0.70 | 0.40 | 2.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Ethylbenzene | 180 | 0.43 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 130 | 0.79 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,2,4-Trimethylbenzene | 1.7 | 0.24 | 2.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,3,5-Trimethylbenzene | 1.4 | 0.36 | 2.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.51 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Acetone | 15 | 5.0 | 20 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Chloroform | 0.76 | 0.27 | 2.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Chloromethane | 1.3 | 0.82 | 6.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| cis-1,2-DCE | ND | 0.78 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.55 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.40 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Isopropylbenzene | 14 | 0.37 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| n-Butylbenzene | 1.5 | 0.51 | 6.0 | J | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| n-Propylbenzene | 14 | 0.36 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| sec-Butylbenzene | 2.3 | 0.29 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Xylenes, Total | 32 | 0.74 | 3.0 | | µg/L | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 2 | 7/5/2022 3:03:24 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

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CLIENT: Marathon

Client Sample ID: NAPIS-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:25:00 AM

Lab ID: 2206E09-004

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 2 | 7/5/2022 3:03:24 PM | R89248 |
| Surr: Toluene-d8 | 98.4 | 0 | 70-130 | | %Rec | 2 | 7/5/2022 3:03:24 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:45:00 AM

Lab ID: 2206E09-005

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 12:26:07 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.54 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 8:04:08 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 8:04:08 PM | 68464 |
| Surr: DNOP | 95.1 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 8:04:08 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.90 | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 9:50:47 PM | A89090 |
| Surr: BFB | 198 | 0 | 70-130 | S | %Rec | 1 | 6/28/2022 9:50:47 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 2.9 | 0.0056 | 0.010 | * | mg/L | 5 | 6/27/2022 4:36:40 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Silver | 0.0029 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| Zinc | 0.0084 | 0.0032 | 0.010 | J | mg/L | 1 | 6/27/2022 4:34:25 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 2.9 | 0.0079 | 0.015 | * | mg/L | 5 | 6/30/2022 5:14:31 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Nickel | 0.025 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Silver | 0.0024 | 0.0018 | 0.0050 | J | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| Zinc | 0.0041 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:44:43 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 3:00:19 PM | B89062 |
| Arsenic | 0.0013 | 0.00012 | 0.0010 | | mg/L | 1 | 6/27/2022 3:00:19 PM | B89062 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/27/2022 3:00:19 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 3:00:19 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/30/2022 1:36:58 PM | 68406 |
| Arsenic | 0.0039 | 0.00013 | 0.0010 | | mg/L | 1 | 6/30/2022 1:36:58 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:45:00 AM

Lab ID: 2206E09-005

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|---------|----------|-----------|------|-------|----|-----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | 0.0013 | 0.000061 | 0.00050 | | mg/L | 1 | 6/30/2022 1:36:58 PM | 68406 |
| Selenium | 0.00037 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/30/2022 1:36:58 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:44:41 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:46:49 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: 2-Fluorophenol | 60.2 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: Phenol-d5 | 44.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: 2,4,6-Tribromophenol | 65.3 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: Nitrobenzene-d5 | 75.5 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: 2-Fluorobiphenyl | 70.4 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| Surr: 4-Terphenyl-d14 | 85.1 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 10:15:47 AM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.68 | 0.11 | 1.0 | J | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Naphthalene | 2.9 | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| 1-Methylnaphthalene | 5.7 | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| 2-Methylnaphthalene | 2.8 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Acenaphthene | 0.72 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Fluorene | 0.52 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Phenanthrene | 0.16 | 0.16 | 0.30 | J | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPIS-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 9:45:00 AM

Lab ID: 2206E09-005

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: TOM | | | | | | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 71.4 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 61.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 2:24:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 75.6 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 2:24:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|--------|---|------|---|---------------------|--------|
| Benzene | 250 | 1.1 | 5.0 | | µg/L | 5 | 7/5/2022 3:30:42 PM | R89248 |
| Toluene | 0.23 | 0.20 | 1.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Ethylbenzene | 49 | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 68 | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,2,4-Trimethylbenzene | 0.19 | 0.12 | 1.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Acetone | 6.5 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Chloroform | 0.22 | 0.13 | 1.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Chloromethane | 0.64 | 0.41 | 3.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Isopropylbenzene | 4.7 | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| n-Butylbenzene | 0.39 | 0.25 | 3.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| n-Propylbenzene | 2.1 | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| sec-Butylbenzene | 0.77 | 0.14 | 1.0 | J | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Xylenes, Total | 3.3 | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 99.5 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 3:58:00 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2206E09
Date Reported: 7/21/2022

| | | | | | |
|---------------------------------------|--|------------------|---------------------------------------|--|--|
| CLIENT: Marathon | | | Client Sample ID: NAPIS-3 | | |
| Project: 2022 GW Sampling 2nd Quarter | | | Collection Date: 6/24/2022 9:45:00 AM | | |
| Lab ID: 2206E09-005 | | Matrix: GROUNDWA | Received Date: 6/24/2022 2:57:00 PM | | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 3:58:00 PM | R89248 |
| Surr: Toluene-d8 | 98.4 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 3:58:00 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:05:00 AM

Lab ID: 2206E09-006

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 7/6/2022 12:41:20 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| Diesel Range Organics (DRO) | 1.2 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 8:28:04 PM | 68464 |
| Motor Oil Range Organics (MRO) | 0.91 | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 8:28:04 PM | 68464 |
| Surr: DNOP | 84.9 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 8:28:04 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| Gasoline Range Organics (GRO) | 0.15 | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 10:14:13 PM | A89090 |
| Surr: BFB | 161 | 0 | 70-130 | S | %Rec | 1 | 6/28/2022 10:14:13 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| Barium | 0.20 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Nickel | 0.025 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Vanadium | 0.016 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 6/27/2022 4:38:48 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| Barium | 0.20 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Nickel | 0.023 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Vanadium | 0.014 | 0.0035 | 0.050 | J | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| Zinc | 0.0066 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:46:44 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 3:03:00 PM | B89062 |
| Arsenic | 0.00071 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/27/2022 3:03:00 PM | B89062 |
| Lead | 0.00024 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/27/2022 3:03:00 PM | B89062 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/27/2022 3:03:00 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/30/2022 1:44:19 PM | 68406 |
| Arsenic | 0.00081 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/30/2022 1:44:19 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:05:00 AM

Lab ID: 2206E09-006

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|---------|----------|-----------|------|-------|----|-----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | 0.00040 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/30/2022 1:44:19 PM | 68406 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/30/2022 1:44:19 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 7/1/2022 2:18:59 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:55:27 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: 2-Fluorophenol | 58.2 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: Phenol-d5 | 44.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: 2,4,6-Tribromophenol | 65.5 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: Nitrobenzene-d5 | 75.9 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: 2-Fluorobiphenyl | 65.9 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| Surr: 4-Terphenyl-d14 | 93.5 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 10:57:24 AM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.58 | 0.11 | 1.0 | J | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:05:00 AM

Lab ID: 2206E09-006

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: TOM | | | | | | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 72.6 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 64.0 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 3:09:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 78.6 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 3:09:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|--------|---|------|---|---------------------|--------|
| Benzene | 3.9 | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Ethylbenzene | 8.6 | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 78 | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Acetone | 2.7 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Chloroform | 0.25 | 0.13 | 1.0 | J | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Isopropylbenzene | 1.7 | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| n-Propylbenzene | 0.59 | 0.18 | 1.0 | J | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| sec-Butylbenzene | 0.26 | 0.14 | 1.0 | J | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Xylenes, Total | 0.72 | 0.37 | 1.5 | J | µg/L | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:25:17 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2206E09
Date Reported: 7/21/2022

CLIENT: Marathon Client Sample ID: KA-3
Project: 2022 GW Sampling 2nd Quarter Collection Date: 6/24/2022 10:05:00 AM
Lab ID: 2206E09-006 Matrix: GROUNDWA Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:25:17 PM | R89248 |
| Surr: Toluene-d8 | 98.2 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:25:17 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:30:00 AM

Lab ID: 2206E09-007

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 12:56:36 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| Diesel Range Organics (DRO) | 0.040 | 0.016 | 0.064 | J | mg/L | 1 | 7/12/2022 12:03:01 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/12/2022 12:03:01 PM | 68464 |
| Surr: DNOP | 25.5 | 0 | 42.2-138 | S | %Rec | 1 | 7/12/2022 12:03:01 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 10:37:39 PM | A89090 |
| Surr: BFB | 98.7 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 10:37:39 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| Barium | 0.040 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Silver | 0.0048 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Vanadium | 0.0022 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| Zinc | 0.025 | 0.0032 | 0.010 | | mg/L | 1 | 6/27/2022 4:43:10 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| Barium | 0.048 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Silver | 0.0044 | 0.0018 | 0.0050 | J | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| Zinc | 0.046 | 0.0039 | 0.010 | | mg/L | 1 | 6/29/2022 9:48:53 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| Antimony | 0.0012 | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 3:05:42 PM | B89062 |
| Arsenic | 0.0038 | 0.00012 | 0.0010 | | mg/L | 1 | 6/27/2022 3:05:42 PM | B89062 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/27/2022 3:05:42 PM | B89062 |
| Selenium | 0.00045 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/27/2022 3:05:42 PM | B89062 |
| EPA 200.8: METALS | | | | | | | | |
| Antimony | 0.00056 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/30/2022 1:46:46 PM | 68406 |
| Arsenic | 0.0044 | 0.00013 | 0.0010 | | mg/L | 1 | 6/30/2022 1:46:46 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:30:00 AM

Lab ID: 2206E09-007

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|---------|----------|-----------|------|---------|----|-----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | 0.00021 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/30/2022 1:46:46 PM | 68406 |
| Selenium | 0.00043 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/30/2022 1:46:46 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 1:57:36 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:04:00 PM | 68497 |
| SM5210B: BOD | | | | | | | | |
| | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 38 | 2.0 | 2.0 | | mg/L | 1 | 6/29/2022 1:38:00 PM | 68337 |
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | | |
| | | | | | | | Analyst: dms | |
| E. Coli | >24196 | 10.00 | 10.00 | | MPN/100 | 10 | 6/25/2022 5:08:00 PM | 68346 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 7/13/2022 11:38:53 AM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:30:00 AM

Lab ID: 2206E09-007

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|---------------------|--------------|
| EPA METHOD 8270SIM | | | | | | | | Analyst: TOM |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Chrysene | ND | 2.5 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 7/7/2022 3:53:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 7/7/2022 3:53:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|-----|---|------|---|---------------------|--------|
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Acetone | 4.2 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Chloromethane | 0.61 | 0.41 | 3.0 | J | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:30:00 AM

Lab ID: 2206E09-007

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:52:32 PM | R89248 |
| Surr: Toluene-d8 | 98.9 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 4:52:32 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:50:00 AM

Lab ID: 2206E09-008

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|---------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 1:11:59 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| Diesel Range Organics (DRO) | 0.045 | 0.016 | 0.064 | J | mg/L | 1 | 7/12/2022 12:27:35 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/12/2022 12:27:35 PM | 68464 |
| Surr: DNOP | 6.11 | 0 | 42.2-138 | S | %Rec | 1 | 7/12/2022 12:27:35 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| Gasoline Range Organics (GRO) | 0.0096 | 0.0090 | 0.050 | J | mg/L | 1 | 6/28/2022 11:01:02 PM | A89090 |
| Surr: BFB | 113 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 11:01:02 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| Barium | 0.17 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Nickel | 0.052 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Silver | 0.010 | 0.0013 | 0.0050 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Vanadium | 0.0050 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 6/27/2022 4:47:50 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| Barium | 0.17 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Nickel | 0.050 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/30/2022 5:15:54 PM | 68406 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| Zinc | 0.0044 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 9:51:07 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/29/2022 3:00:42 PM | C89140 |
| Arsenic | 0.010 | 0.0012 | 0.010 | * | mg/L | 10 | 6/29/2022 3:00:42 PM | C89140 |
| Lead | ND | 0.00057 | 0.0050 | | mg/L | 10 | 6/29/2022 3:00:42 PM | C89140 |
| Selenium | ND | 0.0034 | 0.010 | | mg/L | 10 | 6/29/2022 3:00:42 PM | C89140 |
| EPA 200.8: METALS | | | | | | | | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/30/2022 2:43:37 PM | 68406 |
| Arsenic | 0.011 | 0.00063 | 0.0050 | * | mg/L | 5 | 6/30/2022 2:43:37 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:50:00 AM

Lab ID: 2206E09-008

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|---------|----|-----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | ND | 0.00031 | 0.0025 | | mg/L | 5 | 6/30/2022 2:43:37 PM | 68406 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/30/2022 2:43:37 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:06:08 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:08:16 PM | 68497 |
| SM5210B: BOD | | | | | | | | |
| | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 63 | 2.0 | 2.0 | | mg/L | 1 | 6/29/2022 1:38:00 PM | 68337 |
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | | |
| | | | | | | | Analyst: dms | |
| E. Coli | 10 | 10.00 | 10.00 | | MPN/100 | 10 | 6/25/2022 5:08:00 PM | 68346 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 1800 | 2000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 840 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Di-n-butyl phthalate | ND | 770 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Di-n-octyl phthalate | ND | 1200 | 2000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 240 | 500 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Diethyl phthalate | ND | 600 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Dimethyl phthalate | ND | 600 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 2,4-Dimethylphenol | ND | 580 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 2,4-Dinitrophenol | ND | 1600 | 2000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 2-Methylphenol | ND | 500 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 3+4-Methylphenol | ND | 510 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Phenol | ND | 1800 | 2000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Pyridine | ND | 1400 | 4000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 590 | 1000 | D | µg/L | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 7/13/2022 12:20:43 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 11 | 100 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Naphthalene | ND | 20 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 15 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 14 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:50:00 AM

Lab ID: 2206E09-008

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Acenaphthene | ND | 14 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Fluorene | ND | 9.5 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Phenanthrene | ND | 16 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Anthracene | ND | 14 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Fluoranthene | ND | 14 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Pyrene | ND | 32 | 100 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Benz(a)anthracene | ND | 15 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Chrysene | ND | 25 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 14 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 23 | 30 | D | µg/L | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 7/7/2022 4:38:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 7/7/2022 4:38:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|------|------|-----|---|------|---|---------------------|--------|
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Acetone | 10 | 2.5 | 10 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Carbon disulfide | 1.3 | 0.59 | 10 | J | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Chloromethane | 0.76 | 0.41 | 3.0 | J | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

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CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 10:50:00 AM

Lab ID: 2206E09-008

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Xylenes, Total | 0.66 | 0.37 | 1.5 | J | µg/L | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 118 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:19:49 PM | R89248 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:19:49 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-6

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 11:20:00 AM

Lab ID: 2206E09-009

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| 1,2-Dibromoethane | ND | 0.0025 | 0.0088 | | µg/L | 1 | 7/6/2022 1:27:16 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| Diesel Range Organics (DRO) | 0.90 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 9:39:44 PM | 68464 |
| Motor Oil Range Organics (MRO) | 0.058 | 0.052 | 0.080 | J | mg/L | 1 | 7/9/2022 9:39:44 PM | 68464 |
| Surr: DNOP | 49.8 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 9:39:44 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/28/2022 11:24:31 PM | A89090 |
| Surr: BFB | 97.0 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 11:24:31 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| Barium | 0.32 | 0.0056 | 0.010 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Chromium | 0.021 | 0.0098 | 0.030 | J | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Nickel | 0.20 | 0.016 | 0.050 | * | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Silver | 0.026 | 0.0063 | 0.025 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Vanadium | 0.016 | 0.0086 | 0.25 | J | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 6/27/2022 4:54:46 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| Barium | 0.31 | 0.016 | 0.030 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Beryllium | ND | 0.0088 | 0.020 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Cadmium | ND | 0.018 | 0.020 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Chromium | ND | 0.020 | 0.060 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Cobalt | ND | 0.035 | 0.060 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Nickel | 0.24 | 0.053 | 0.10 | * | mg/L | 10 | 6/30/2022 5:31:57 PM | 68406 |
| Silver | ND | 0.018 | 0.050 | | mg/L | 10 | 6/30/2022 5:31:57 PM | 68406 |
| Vanadium | ND | 0.035 | 0.50 | | mg/L | 10 | 7/7/2022 11:33:07 AM | 68406 |
| Zinc | ND | 0.039 | 0.10 | | mg/L | 10 | 6/30/2022 5:31:57 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| Antimony | ND | 0.022 | 0.050 | | mg/L | 50 | 6/29/2022 3:03:24 PM | C89140 |
| Arsenic | 0.13 | 0.0061 | 0.050 | * | mg/L | 50 | 6/29/2022 3:03:24 PM | C89140 |
| Lead | ND | 0.0028 | 0.025 | | mg/L | 50 | 6/29/2022 3:03:24 PM | C89140 |
| Selenium | ND | 0.017 | 0.050 | | mg/L | 50 | 6/29/2022 3:03:24 PM | C89140 |
| EPA 200.8: METALS | | | | | | | | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 6/30/2022 2:46:04 PM | 68406 |
| Arsenic | 0.13 | 0.0025 | 0.020 | * | mg/L | 20 | 6/30/2022 2:46:04 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-6

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 11:20:00 AM

Lab ID: 2206E09-009

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|---------|-----|----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Lead | ND | 0.0061 | 0.050 | | mg/L | 100 | 7/5/2022 2:41:41 PM | 68406 |
| Selenium | 0.011 | 0.0074 | 0.020 | J | mg/L | 20 | 6/30/2022 2:46:04 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:10:25 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:12:33 PM | 68497 |
| SM5210B: BOD | | | | | | | | |
| | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 50 | 2.0 | 2.0 | | mg/L | 1 | 6/29/2022 1:38:00 PM | 68337 |
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | | |
| | | | | | | | Analyst: dms | |
| E. Coli | <10 | 10.00 | 10.00 | | MPN/100 | 10 | 6/25/2022 5:08:00 PM | 68346 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 700 | 800 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 340 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Di-n-butyl phthalate | ND | 310 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Di-n-octyl phthalate | ND | 470 | 800 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 98 | 200 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Diethyl phthalate | ND | 240 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Dimethyl phthalate | ND | 240 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 2,4-Dimethylphenol | ND | 230 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 2,4-Dinitrophenol | ND | 650 | 800 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 2-Methylphenol | ND | 200 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 3+4-Methylphenol | ND | 200 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Phenol | ND | 730 | 800 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Pyridine | ND | 580 | 1600 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 240 | 400 | D | µg/L | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 7/13/2022 1:06:42 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 4.2 | 40 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Naphthalene | ND | 8.0 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 6.1 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 5.8 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-6

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 11:20:00 AM

Lab ID: 2206E09-009

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|--------------|
| EPA METHOD 8270SIM | | | | | | | | Analyst: TOM |
| Acenaphthene | ND | 5.4 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Fluorene | ND | 3.8 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Phenanthrene | ND | 6.2 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Anthracene | ND | 5.8 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Fluoranthene | ND | 5.6 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Pyrene | ND | 13 | 40 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Benz(a)anthracene | ND | 6.0 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Chrysene | ND | 10 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 5.6 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 9.3 | 12 | D | µg/L | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 7/7/2022 5:23:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 7/7/2022 5:23:00 PM | 68468 |

EPA METHOD 8260B: VOLATILES

Analyst: RAA

| | | | | | | | | |
|--------------------------------|-----|------|-----|---|------|---|---------------------|--------|
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Acetone | 23 | 2.5 | 10 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Chloromethane | 1.4 | 0.41 | 3.0 | J | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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CLIENT: Marathon

Client Sample ID: EP-6

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 11:20:00 AM

Lab ID: 2206E09-009

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Xylenes, Total | 0.65 | 0.37 | 1.5 | J | µg/L | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Surr: Dibromofluoromethane | 121 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:47:02 PM | R89248 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 5:47:02 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022 11:20:00 AM

Lab ID: 2206E09-010

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Toluene | 0.22 | 0.20 | 1.0 | J | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Acetone | 7.4 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Xylenes, Total | 0.64 | 0.37 | 1.5 | J | µg/L | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:14:14 PM | R89248 |
| Surr: Toluene-d8 | 97.3 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:14:14 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022

Lab ID: 2206E09-011

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|---------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | | |
| | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 1:42:30 AM | 68526 |
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | |
| | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 10:03:36 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 10:03:36 PM | 68464 |
| Surr: DNOP | 112 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 10:03:36 PM | 68464 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | | |
| | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.028 | 0.0090 | 0.050 | J | mg/L | 1 | 6/28/2022 11:47:55 PM | A89090 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 6/28/2022 11:47:55 PM | A89090 |
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.054 | 0.0011 | 0.0020 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Nickel | 0.030 | 0.0033 | 0.010 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Silver | 0.0058 | 0.0013 | 0.0050 | | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Vanadium | 0.0023 | 0.0017 | 0.050 | J | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| Zinc | 0.0072 | 0.0032 | 0.010 | J | mg/L | 1 | 6/27/2022 5:04:09 PM | B89068 |
| EPA METHOD 200.7: METALS | | | | | | | | |
| | | | | | | | Analyst: JLF | |
| Barium | 0.10 | 0.0016 | 0.0030 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Nickel | 0.032 | 0.0053 | 0.010 | | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/30/2022 5:24:53 PM | 68406 |
| Vanadium | 0.0063 | 0.0035 | 0.050 | J | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| Zinc | 0.0090 | 0.0039 | 0.010 | J | mg/L | 1 | 6/29/2022 10:03:32 PM | 68406 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/29/2022 3:14:10 PM | C89140 |
| Arsenic | 0.00092 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/29/2022 3:14:10 PM | C89140 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/29/2022 3:14:10 PM | C89140 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/29/2022 3:14:10 PM | C89140 |
| EPA 200.8: METALS | | | | | | | | |
| | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/30/2022 3:03:18 PM | 68406 |
| Arsenic | 0.0013 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/30/2022 3:03:18 PM | 68406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022

Lab ID: 2206E09-011

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|-----------|------|-------|----|-----------------------|----------|
| EPA 200.8: METALS | | | | | | | | |
| Analyst: bcv | | | | | | | | |
| Lead | 0.0019 | 0.00031 | 0.0025 | J | mg/L | 5 | 6/30/2022 3:03:18 PM | 68406 |
| Selenium | 0.0020 | 0.0019 | 0.0050 | J | mg/L | 5 | 6/30/2022 3:03:18 PM | 68406 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| Analyst: VP | | | | | | | | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:14:41 PM | 68497 |
| EPA METHOD 245.1: MERCURY | | | | | | | | |
| Analyst: VP | | | | | | | | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/1/2022 2:16:50 PM | 68497 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | |
| Analyst: JME | | | | | | | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: 2-Fluorophenol | 51.7 | 0 | 29.4-87.7 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: Phenol-d5 | 41.1 | 0 | 28.5-64.7 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 56.4 | 0 | 18.6-129 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: Nitrobenzene-d5 | 69.3 | 0 | 36.9-103 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 62.6 | 0 | 38.1-99.9 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 80.4 | 0 | 48-155 | | %Rec | 1 | 7/18/2022 12:18:51 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | | |
| Analyst: TOM | | | | | | | | |
| 1,4-Dioxane | 7.1 | 0.11 | 1.0 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-24-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/24/2022

Lab ID: 2206E09-011

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|-----------|------|--------------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | Analyst: TOM | | | |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Surr: Nitrobenzene-d5 | 66.9 | 0 | 31.6-100 | | %Rec | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Surr: 2-Fluorobiphenyl | 64.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/18/2022 10:53:00 AM | 68468 |
| Surr: 4-Terphenyl-d14 | 87.5 | 0 | 72.3-147 | | %Rec | 1 | 7/18/2022 10:53:00 AM | 68468 |
| EPA METHOD 8260B: VOLATILES | | | | | Analyst: RAA | | | |
| Benzene | 0.63 | 0.23 | 1.0 | J | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | 41 | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,2-Dichloroethane (EDC) | 0.78 | 0.25 | 1.0 | J | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Acetone | 2.9 | 2.5 | 10 | J | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,1-Dichloroethane | 1.7 | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,1-Dichloroethene | 0.85 | 0.20 | 1.0 | J | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:41:28 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

| | | | | | |
|---------------------------------------|--|------------------|-------------------------------------|--|--|
| CLIENT: Marathon | | | Client Sample ID: DUP-6-24-22 | | |
| Project: 2022 GW Sampling 2nd Quarter | | | Collection Date: 6/24/2022 | | |
| Lab ID: 2206E09-011 | | Matrix: GROUNDWA | Received Date: 6/24/2022 2:57:00 PM | | |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Surr: Dibromofluoromethane | 121 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:41:28 PM | R89248 |
| Surr: Toluene-d8 | 99.7 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 6:41:28 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order 2206E09

Date Reported: 7/21/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206E09-012

Matrix: GROUNDWA

Received Date: 6/24/2022 2:57:00 PM

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 7/6/2022 1:57:49 AM | 68526 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Surr: 1,2-Dichloroethane-d4 | 120 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Surr: Dibromofluoromethane | 125 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 7:08:38 PM | R89248 |
| Surr: Toluene-d8 | 95.4 | 0 | 70-130 | | %Rec | 1 | 7/5/2022 7:08:38 PM | R89248 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

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ANALYTICAL REPORT

July 12, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1509495

Samples Received: 06/28/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Sr: Sample Results | 6 |
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2206E09-001F EB-6-24-22 L1509495-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888930 | 1 | 07/03/22 19:45 | 07/04/22 23:19 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 08:00
06/28/22 09:00

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206E09-002F MKTF-27 L1509495-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1888930 | 1 | 07/03/22 19:45 | 07/04/22 23:23 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 08:30
06/28/22 09:00

2206E09-003F MKTF-28 L1509495-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:29 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 09:00
06/28/22 09:00

2206E09-004F NAPIS-2 L1509495-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:32 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 09:25
06/28/22 09:00

2206E09-005F NAPIS-3 L1509495-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:35 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 09:45
06/28/22 09:00

2206E09-006F KA-3 L1509495-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:36 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 10:05
06/28/22 09:00

2206E09-007F STP-1 TO EP-2 L1509495-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:37 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 10:30
06/28/22 09:00

2206E09-007I STP-1 TO EP-2 L1509495-08 WW

| | | | | | | |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 410.4 | WG1891521 | 1 | 07/10/22 20:00 | 07/11/22 00:08 | CRB | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 10:30
06/28/22 09:00

SAMPLE SUMMARY

2206E09-008F EP-2 L1509495-09 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:38 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 10:50
06/28/22 09:00

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206E09-008I EP-2 L1509495-10 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1891521 | 1 | 07/10/22 20:00 | 07/11/22 00:13 | CRB | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 10:50
06/28/22 09:00

2206E09-009F EP-6 L1509495-11 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:39 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 11:20
06/28/22 09:00

2206E09-009I EP-6 L1509495-12 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1891521 | 5 | 07/10/22 20:00 | 07/11/22 00:15 | CRB | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 11:20
06/28/22 09:00

2206E09-011F DUP-24-2 L1509495-13 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1889365 | 1 | 07/05/22 07:54 | 07/07/22 19:40 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/24/22 00:00
06/28/22 09:00

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

| <u>Lab Sample ID</u> | <u>Project Sample ID</u> | <u>Method</u> |
|-----------------------------|-----------------------------------|---------------|
| L1509495-11 | 2206E09-009F EP-6 | 4500CN E-2016 |



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 07/04/2022 23:19 | WG1888930 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 16.3 | | 1.80 | 5.00 | 1 | 07/04/2022 23:23 | WG1888930 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 7.86 | | 1.80 | 5.00 | 1 | 07/07/2022 19:29 | WG1889365 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 14.0 | | 1.80 | 5.00 | 1 | 07/07/2022 19:32 | WG1889365 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 12.6 | | 1.80 | 5.00 | 1 | 07/07/2022 19:35 | WG1889365 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 12.9 | | 1.80 | 5.00 | 1 | 07/07/2022 19:36 | WG1889365 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 06/24/22 10:30

L1509495

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 07/07/2022 19:37 | WG1889365 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/24/22 10:30

L1509495

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|-------|-------|----------|----------------------|---------------------------|
| COD | 234000 | | 11700 | 20000 | 1 | 07/11/2022 00:08 | WG1891521 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 07/07/2022 19:38 | WG1889365 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 410.4

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| COD | 810000 | | 11700 | 20000 | 1 | 07/11/2022 00:13 | WG1891521 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 4.40 | J | 1.80 | 5.00 | 1 | 07/07/2022 19:39 | WG1889365 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|-------|--------|----------|----------------------|---------------------------|
| COD | 4520000 | | 58500 | 100000 | 5 | 07/11/2022 00:15 | WG1891521 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 14.7 | | 1.80 | 5.00 | 1 | 07/07/2022 19:40 | WG1889365 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3812988-1 07/11/22 00:06

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| COD | U | | 11700 | 20000 |

L1509495-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1509495-08 07/11/22 00:08 • (DUP) R3812988-5 07/11/22 00:08

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | ug/l | ug/l | | % | | % |
| COD | 234000 | 231000 | 1 | 1.16 | | 20 |

L1509508-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1509508-01 07/11/22 00:17 • (DUP) R3812988-6 07/11/22 00:18

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | ug/l | ug/l | | % | | % |
| COD | 147000 | 143000 | 1 | 2.89 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3812988-2 07/11/22 00:06

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| COD | 500000 | 496000 | 99.1 | 90.0-110 | |

L1508227-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508227-01 07/11/22 00:06 • (MS) R3812988-3 07/11/22 00:06 • (MSD) R3812988-4 07/11/22 00:06

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| COD | 500000 | 184000 | 601000 | 595000 | 83.3 | 82.2 | 1 | 80.0-120 | | | 0.933 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3810635-1 07/04/22 22:58

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Cyanide | U | | 1.80 | 5.00 |

L1507944-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1507944-17 07/04/22 23:03 • (DUP) R3810635-3 07/04/22 23:04

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1509495-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1509495-01 07/04/22 23:19 • (DUP) R3810635-8 07/04/22 23:20

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3810635-2 07/04/22 22:59

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Cyanide | 100 | 97.7 | 97.7 | 87.1-120 | |

L1508969-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508969-02 07/04/22 23:13 • (MS) R3810635-4 07/04/22 23:14 • (MSD) R3810635-5 07/04/22 23:15

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 100 | U | 100 | 95.6 | 100 | 95.6 | 1 | 90.0-110 | | | 4.50 | 20 |

L1509137-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1509137-01 07/04/22 23:42 • (MS) R3810635-9 07/04/22 23:43 • (MSD) R3810635-10 07/04/22 23:44

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 100 | U | 77.1 | 93.2 | 77.1 | 93.2 | 1 | 90.0-110 | J6 | | 18.9 | 20 |



Wet Chemistry by Method 4500CN E-2016

[L1509495-03,04,05,06,07,09,11,13](#)

Method Blank (MB)

(MB) R3812224-1 07/07/22 19:10

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1509260-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1509260-05 07/07/22 19:26 • (DUP) R3812224-5 07/07/22 19:27

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1509640-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1509640-01 07/07/22 19:54 • (DUP) R3812224-10 07/07/22 19:55

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 2.63 | 10.4 | 1 | 119 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3812224-2 07/07/22 19:11

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 98.1 | 98.1 | 87.1-120 | |

L1509260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1509260-01 07/07/22 19:17 • (MS) R3812224-3 07/07/22 19:18 • (MSD) R3812224-4 07/07/22 19:19

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | 2.82 | 95.7 | 95.6 | 92.9 | 92.8 | 1 | 90.0-110 | | | 0.105 | 20 |

L1509495-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1509495-03 07/07/22 19:29 • (MS) R3812224-6 07/07/22 19:30 • (MSD) R3812224-7 07/07/22 19:31

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | 7.86 | 103 | 99.7 | 95.1 | 91.8 | 1 | 90.0-110 | | | 3.26 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

| | |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Qc |
| 7 | Gl |
| 8 | Al |
| 9 | Sc |

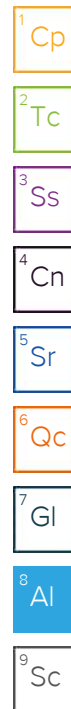
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

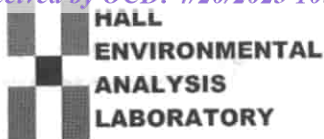
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

A093

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYSIS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|-------------------------|
| 1 | 2206E09-001F | EB-6-24-22 | 500AMBHDP | Groundw | 6/24/2022 8:00:00 AM | 1 | Total Cyanide J and MDL |
| 2 | 2206E09-002F | MKTF-27 | 500AMBHDP | Groundw | 6/24/2022 8:30:00 AM | 1 | Total Cyanide J and MDL |
| 3 | 2206E09-003F | MKTF-28 | 500AMBHDP | Groundw | 6/24/2022 9:00:00 AM | 1 | Total Cyanide J and MDL |
| 4 | 2206E09-004F | NAPIS-2 | 500AMBHDP | Groundw | 6/24/2022 9:25:00 AM | 1 | Total Cyanide J and MDL |
| 5 | 2206E09-005F | NAPIS-3 | 500AMBHDP | Groundw | 6/24/2022 9:45:00 AM | 1 | Total Cyanide J and MDL |
| 6 | 2206E09-006F | KA-3 | 500AMBHDP | Groundw | 6/24/2022 10:05:00 AM | 1 | Total Cyanide J and MDL |
| 7 | 2206E09-007F | STP-1 to EP-2 | 500AMBHDP | Groundw | 6/24/2022 10:30:00 AM | 1 | Total Cyanide J and MDL |
| 8 | 2206E09-007I | STP-1 to EP-2 | 500HDPEH2 | Groundw | 6/24/2022 10:30:00 AM | 1 | COD- J and MDL |
| 9 | 2206E09-008F | EP-2 | 500AMBHDP | Groundw | 6/24/2022 10:50:00 AM | 1 | Total Cyanide J and MDL |
| 10 | 2206E09-008I | EP-2 | 500HDPEH2 | Groundw | 6/24/2022 10:50:00 AM | 1 | COD- J and MDL |
| 11 | 2206E09-009F | EP-6 | 500AMBHDP | Groundw | 6/24/2022 11:20:00 AM | 1 | Total Cyanide J and MDL |
| 12 | 2206E09-009I | EP-6 | 500HDPEH2 | Groundw | 6/24/2022 11:20:00 AM | 1 | COD- J and MDL |
| 13 | 2206E09-011F | DUP-6-24-22 | 500AMBHDP | Groundw | 6/24/2022 | 1 | Total Cyanide J and MDL |

| | | | | | | | |
|---|--|--|--|--|--|--|--|
| Sample Receipt Checklist
COC Seal Present/Intact: ☒ Y ☐ N If Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N | | | | | | | |
|---|--|--|--|--|--|--|--|

11509495

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

DRAFT
0.2 to 0.92

5755 8084 4318

| | | | | | |
|------------------|------------------------|----------------------|--------------|------------------------|----------------------|
| Relinquished By: | Date: 6/27/2022 | Time: 9:53 AM | Received By: | Date: 6/27/2022 | Time: 9:00 AM |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

| | | |
|--|--|---|
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE |
| | | FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool? _____
Comments: _____ |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68406 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68406 | RunNo: 89144 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167860 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68406 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68406 | RunNo: 89144 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167861 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0030 | 0.002000 | 0 | 83.6 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.4 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 109 | 50 | 150 | | | |
| Chromium | 0.0074 | 0.0060 | 0.006000 | 0 | 123 | 50 | 150 | | | |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0068 | 0.010 | 0.005000 | 0 | 136 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0090 | 0.050 | 0.01000 | 0 | 90.1 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 122 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68406 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68406 | RunNo: 89144 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167862 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.6 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B89068 | RunNo: 89068 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3164612 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B89068 | RunNo: 89068 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3164613 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 105 | 50 | 150 | | | |
| Chromium | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0036 | 0.010 | 0.005000 | 0 | 72.2 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 94.8 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 110 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 116 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B89068 | RunNo: 89068 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3164614 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.9 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A89154 | | RunNo: 89154 | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | | SeqNo: 3168573 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A89154 | | RunNo: 89154 | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | | SeqNo: 3168574 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A89154 | | RunNo: 89154 | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | | SeqNo: 3168575 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68406 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68406 | | RunNo: 89161 | | | | | | |
| Prep Date: 6/28/2022 | | Analysis Date: 6/30/2022 | | SeqNo: 3168846 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68406 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68406 | | RunNo: 89161 | | | | | | |
| Prep Date: 6/28/2022 | | Analysis Date: 6/30/2022 | | SeqNo: 3168847 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00099 | 0.0010 | 0.001000 | 0 | 98.7 | 50 | 150 | | | J |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Lead | 0.00048 | 0.00050 | 0.0005000 | 0 | 95.3 | 50 | 150 | | | J |
| Selenium | 0.00077 | 0.0010 | 0.001000 | 0 | 77.4 | 50 | 150 | | | J |

| | | | | | | | | | | | |
|-------------------------------|--|---------------------------------|---------|------------------------------------|-----------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCS-68406 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | | Batch ID: 68406 | | | RunNo: 89161 | | | | | | |
| Prep Date: 6/28/2022 | | Analysis Date: 6/30/2022 | | | SeqNo: 3168848 | | Units: mg/L | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | | 0.024 | 0.0010 | 0.02500 | 0 | 97.0 | 85 | 115 | | | |
| Arsenic | | 0.024 | 0.0010 | 0.02500 | 0 | 95.6 | 85 | 115 | | | |
| Lead | | 0.012 | 0.00050 | 0.01250 | 0 | 97.2 | 85 | 115 | | | |
| Selenium | | 0.023 | 0.0010 | 0.02500 | 0 | 91.0 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2206E09-011DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP-6-24-22 | | Batch ID: 68406 | | RunNo: 89161 | | | | | | |
| Prep Date: 6/28/2022 | | Analysis Date: 6/30/2022 | | SeqNo: 3168927 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0050 | 0.02500 | 0 | 101 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0050 | 0.02500 | 0.001320 | 98.7 | 70 | 130 | | | |
| Lead | 0.013 | 0.0025 | 0.01250 | 0.001931 | 92.1 | 70 | 130 | | | |
| Selenium | 0.024 | 0.0050 | 0.02500 | 0.002016 | 89.7 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B89062 | RunNo: 89062 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163459 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B89062 | RunNo: 89062 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163460 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00098 | 0.0010 | 0.001000 | 0 | 97.5 | 50 | 150 | | | J |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 104 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B89062 | RunNo: 89062 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163461 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.5 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206E09-001EMSSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB-6-24-22 | Batch ID: B89062 | RunNo: 89062 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163491 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.0 | 70 | 130 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 95.4 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 93.7 | 70 | 130 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206E09-001EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB-6-24-22 | Batch ID: B89062 | RunNo: 89062 | | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | SeqNo: 3163492 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2206E09-001EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-6-24-22 | | Batch ID: B89062 | | RunNo: 89062 | | | | | | |
| Prep Date: | | Analysis Date: 6/27/2022 | | SeqNo: 3163492 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.4 | 70 | 130 | 0.399 | 20 | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 70 | 130 | 2.36 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.0 | 70 | 130 | 1.36 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 70 | 130 | 7.21 | 20 | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|---------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: C89140 | | RunNo: 89140 | | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | SeqNo: 3167568 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: C89140 | | RunNo: 89140 | | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | SeqNo: 3167569 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Lead | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Selenium | 0.00074 | 0.0010 | 0.001000 | 0 | 74.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: LCSW | | Batch ID: C89140 | | | RunNo: 89140 | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | | SeqNo: 3167570 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.6 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 100 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2206E09-002EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: MKTF-27 | | Batch ID: C89140 | | RunNo: 89140 | | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | SeqNo: 3167587 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2206E09-002EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: MKTF-27 | | Batch ID: C89140 | | RunNo: 89140 | | | | | | |
| Prep Date: | | Analysis Date: 6/29/2022 | | SeqNo: 3167587 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.13 | 0.0050 | 0.1250 | 0 | 104 | 70 | 130 | | | |
| Arsenic | 0.14 | 0.0050 | 0.1250 | 0.0005712 | 110 | 70 | 130 | | | |
| Lead | 0.060 | 0.0025 | 0.06250 | 0.00006309 | 95.6 | 70 | 130 | | | |
| Selenium | 0.14 | 0.0050 | 0.1250 | 0.0009616 | 113 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-68497 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68497 | RunNo: 89187 |
| Prep Date: 7/1/2022 | Analysis Date: 7/1/2022 | SeqNo: 3170344 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|--------------------------------|--|
| Sample ID: LCSLL-68497 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68497 | RunNo: 89187 |
| Prep Date: 7/1/2022 | Analysis Date: 7/1/2022 | SeqNo: 3170345 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00015 | 0.00020 0.0001500 0 101 50 150 J |

| | | |
|-----------------------------|--------------------------------|--|
| Sample ID: LCS-68497 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68497 | RunNo: 89187 |
| Prep Date: 7/1/2022 | Analysis Date: 7/1/2022 | SeqNo: 3170346 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.0 85 115 |

| | | |
|----------------------------------|--------------------------------|--|
| Sample ID: 2206E09-006DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: KA-3 | Batch ID: 68497 | RunNo: 89187 |
| Prep Date: 7/1/2022 | Analysis Date: 7/1/2022 | SeqNo: 3170385 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0050 | 0.0010 0.005000 0 100 75 125 |

| | | |
|-----------------------------------|--------------------------------|--|
| Sample ID: 2206E09-006DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: KA-3 | Batch ID: 68497 | RunNo: 89187 |
| Prep Date: 7/1/2022 | Analysis Date: 7/1/2022 | SeqNo: 3170386 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 | 0.0010 0.005000 0 103 75 125 2.65 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|---------------------|-------------------------|--|
| Sample ID: MB-68526 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68526 | RunNo: 89255 |
| Prep Date: 7/5/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173577 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|---------------------|-------------------------|--|
| Sample ID: MB-68526 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68526 | RunNo: 89255 |
| Prep Date: 7/5/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173578 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|-------------------------|--|
| Sample ID: LCS-68526 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 68526 | RunNo: 89255 |
| Prep Date: 7/5/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173579 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 103 70 130 |

| | | |
|-----------------------|-------------------------|--|
| Sample ID: LCSD-68526 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 68526 | RunNo: 89255 |
| Prep Date: 7/5/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173580 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.097 | 0.010 0.1000 0 96.7 70 130 6.49 20 |

| | | |
|---------------------------|-------------------------|--|
| Sample ID: 2206E09-001BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: EB-6-24-22 | Batch ID: 68526 | RunNo: 89255 |
| Prep Date: 7/5/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173596 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.073 | 0.0094 0.09358 0 77.5 65 135 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68464 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68464 | | RunNo: 89260 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | | SeqNo: 3179323 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.037 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 101 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68464 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68464 | | RunNo: 89260 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | | SeqNo: 3179324 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.16 | 0.064 | 0.1875 | 0 | 83.6 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.021 | | 0.01875 | | 111 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68464 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68464 | | RunNo: 89260 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | | SeqNo: 3179325 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 69.2 | 31.7 | 75.4 | 18.9 | 20 | |
| Surr: DNOP | 0.021 | | 0.01875 | | 111 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A89090 | | RunNo: 89090 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3164961 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A89090 | | RunNo: 89090 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3164962 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55 | 0.050 | 0.5000 | 0 | 110 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 210 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206e09-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-27 | Batch ID: A89090 | | RunNo: 89090 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3164967 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.56 | 0.050 | 0.5000 | 0.04620 | 104 | 70 | 130 | | | |
| Surr: BFB | 44 | | 20.00 | | 221 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206e09-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-27 | Batch ID: A89090 | | RunNo: 89090 | | | | | | | |
| Prep Date: | Analysis Date: 6/28/2022 | | SeqNo: 3164968 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55 | 0.050 | 0.5000 | 0.04620 | 101 | 70 | 130 | 2.22 | 20 | |
| Surr: BFB | 45 | | 20.00 | | 224 | 70 | 130 | 0 | 0 | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89248 | | RunNo: 89248 | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | | SeqNo: 3172851 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 99.3 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Trichloroethene (TCE) | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89248 | | RunNo: 89248 | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | | SeqNo: 3172867 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89248 | | RunNo: 89248 | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | | SeqNo: 3172867 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-68408 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68408 | | RunNo: 89212 | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/3/2022 | | SeqNo: 3171206 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 87 | 10 | 100.0 | 0 | 87.3 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 72 | 5.0 | 100.0 | 0 | 72.1 | 15 | 89.8 | | | |
| Phenol | 110 | 20 | 200.0 | 0 | 53.4 | 17 | 61.1 | | | |
| Pyrene | 100 | 10 | 100.0 | 0 | 99.6 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 64.5 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 97 | | 200.0 | | 48.5 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 81.9 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 84 | | 100.0 | | 83.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 78 | | 100.0 | | 78.3 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 111 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-68408 | SampType: LCSd | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68408 | | RunNo: 89212 | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/3/2022 | | SeqNo: 3171207 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 79 | 10 | 100.0 | 0 | 79.0 | 21.3 | 104 | 10.0 | 45.3 | |
| 1,4-Dichlorobenzene | 63 | 5.0 | 100.0 | 0 | 63.4 | 15 | 89.8 | 12.8 | 39.6 | |
| Phenol | 94 | 20 | 200.0 | 0 | 47.1 | 17 | 61.1 | 12.6 | 42.5 | |
| Pyrene | 88 | 10 | 100.0 | 0 | 88.0 | 61 | 123 | 12.3 | 11.8 | R |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 59.4 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 88 | | 200.0 | | 44.2 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 72.3 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 77.6 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.4 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 99 | | 100.0 | | 99.4 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68408 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68408 | | RunNo: 89274 | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174728 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68408 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68408 | | RunNo: 89274 | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174728 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 65.9 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 98 | | 200.0 | | 49.2 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 61.6 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 77 | | 100.0 | | 77.2 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 69.8 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.8 | 48 | 155 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68468 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183125 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68468 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183125 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 62.3 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 95 | | 200.0 | | 47.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 56.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 77 | | 100.0 | | 77.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 68.6 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 96 | | 100.0 | | 96.4 | 48 | 155 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68468 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183126 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 76 | 10 | 100.0 | 0 | 75.6 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 64 | 5.0 | 100.0 | 0 | 63.5 | 15 | 89.8 | | | |
| Phenol | 99 | 20 | 200.0 | 0 | 49.6 | 17 | 61.1 | | | |
| Pyrene | 97 | 10 | 100.0 | 0 | 96.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 62.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 95 | | 200.0 | | 47.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 62.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 82 | | 100.0 | | 81.8 | 36.9 | 103 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68468 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183126 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.5 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 102 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68468 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183127 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 41 | 10 | 100.0 | 0 | 41.3 | 21.3 | 104 | 58.7 | 45.3 | R |
| 1,4-Dichlorobenzene | 36 | 5.0 | 100.0 | 0 | 36.0 | 15 | 89.8 | 55.4 | 39.6 | R |
| Phenol | 54 | 20 | 200.0 | 0 | 26.9 | 17 | 61.1 | 59.2 | 42.5 | R |
| Pyrene | 80 | 10 | 100.0 | 0 | 79.8 | 61 | 123 | 19.2 | 11.8 | R |
| Surr: 2-Fluorophenol | 69 | | 200.0 | | 34.3 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 51 | | 200.0 | | 25.4 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 54.5 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 45 | | 100.0 | | 44.9 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 41.8 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 77 | | 100.0 | | 77.4 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-68408 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68408 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173307 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 86 | | 100.0 | | 86.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 96 | | 200.0 | | 47.9 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 82 | | 100.0 | | 81.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 118 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-68408 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68408 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173308 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 21.3 | 79.9 | | | S |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 29.8 | 82.7 | | | S |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 52.9 | 123 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 88.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 51 | 147 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 101 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 83 | | 100.0 | | 83.1 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: Ics-68408 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68408 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173308 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 95 | | 200.0 | | 47.3 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 78 | | 100.0 | | 77.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.7 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: Icsd-68408 | SampType: LCSD | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68408 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/28/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173309 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.92 | 0.10 | 2.000 | 0 | 46.0 | 20.2 | 48.4 | 14.1 | 30.1 | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 21.3 | 79.9 | 17.7 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 22.2 | 80.3 | 16.9 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 20.6 | 80.1 | 15.8 | 25 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 29.8 | 82.7 | 15.4 | 27.8 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 33.3 | 86 | 12.5 | 26.4 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 38.2 | 93.9 | 11.8 | 27.9 | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 41.1 | 95.6 | 13.5 | 25.6 | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 52.9 | 123 | 14.0 | 22.8 | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 77.0 | 51 | 113 | 13.3 | 20 | |
| Benz(a)anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 51 | 147 | 13.3 | 24.1 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | 10.2 | 20 | |
| Benzo(b)fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 44.4 | 136 | 12.7 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 31.4 | 165 | 13.8 | 21.1 | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.4 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 89 | | 200.0 | | 44.5 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.9 | 72.3 | 147 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-68468 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68468 | RunNo: 89400 | | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/7/2022 | SeqNo: 3180358 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68468 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68468 | RunNo: 89400 | | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/7/2022 | SeqNo: 3180358 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 69.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 96 | | 100.0 | | 96.1 | 72.3 | 147 | | | |

| Sample ID: LCS-68468 LF | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68468 | RunNo: 89400 | | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/7/2022 | SeqNo: 3180359 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 101 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 105 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 115 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 87.9 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: Icsd-68468 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68468 | | | RunNo: 89400 | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3180360 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.2 | 48.4 | 0 | 30.1 | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 21.3 | 79.9 | 1.55 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 20.6 | 80.1 | 1.60 | 25 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 29.8 | 82.7 | 1.38 | 27.8 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 33.3 | 86 | 2.56 | 26.4 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 38.2 | 93.9 | 4.76 | 27.9 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 41.1 | 95.6 | 4.55 | 25.6 | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 52.9 | 123 | 5.08 | 22.8 | |
| Pyrene | 1.6 | 1.0 | 2.000 | 0 | 82.0 | 51 | 113 | 5.92 | 20 | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 51 | 147 | 10.0 | 24.1 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 55.3 | 115 | 11.9 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 44.4 | 136 | 10.8 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 31.4 | 165 | 15.0 | 21.1 | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 48.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.9 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68337 | SampType: MBLK | | TestCode: SM5210B: BOD | | | | | | | |
| Client ID: PBW | Batch ID: 68337 | | RunNo: 89149 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3168371 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Biochemical Oxygen Demand | ND | 2.0 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68337 | SampType: LCS | | TestCode: SM5210B: BOD | | | | | | | |
| Client ID: LCSW | Batch ID: 68337 | | RunNo: 89149 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3168372 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Biochemical Oxygen Demand | 206 | 2.0 | 198.0 | 0 | 104 | 84.6 | 115.4 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206E09

21-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-------------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68346 | SampType: MBLK | TestCode: SM 9223B Fecal Indicator: E. coli MPN | | | | | | | | |
| Client ID: PBW | Batch ID: 68346 | RunNo: 89022 | | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 6/25/2022 | SeqNo: 3161480 | Units: MPN/100mL | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli | <1 | 1.000 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2206E09

RcptNo: 1

Received By: Joseph Alderette 6/24/2022 2:57:00 PM

Completed By: Desiree Dominguez 6/24/2022 3:09:21 PM

Reviewed By: *one* *6/24/22* *15:45*BOD + Ecoli: *7/26/24/22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☒ *7/26/27/22*
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ *7/26/27/22* NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: *239*

<2 or 12 unless noted

Adjusted? *yes*

Checked by: *7/26/27/22*

BOD + Ecoli: *7/26/24/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: *0.5ml of HNO3 was added to sample w/o for pH 2. 7/26/27/22.*

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.3 | Good | Yes | | | |
| 2 | 1.4 | Good | Yes | | | |
| 3 | 0.8 | Good | Yes | | | |
| 4 | 1.3 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

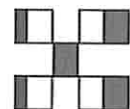
Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2206E09**

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 5.1 | Good | Yes | | | |
| 6 | 2.5 | Good | Yes | | | |



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

See Checklist

| Client: Marathon Gallup Refinery | | X Standard Rush | | | | |
|---|-------|--|------------------|----------------------|-------------------|----------|
| Mailing Address: 92 Giant Crossing Road
Jamestown, NM, 87347 | | Project Name: 2022 GW Sampling 2nd Quarter | | | | |
| Phone #: 808-640-1823 | | Project #: 697-080-001 | | | | |
| e-mail or Fax#: | | Project Manager: Lesli Alexander/Mackensie Swift | | | | |
| QC/QC Package: X Standard ☐ Level 4 (Full Validation) | | Sampler: On Ice: ☒ Yes ☐ No | | | | |
| Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other | | # of Coolers: 6 | | | | |
| X: EDD (Type) | | Cooler Temp (including GF): See Checklist | | | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
| 6/24 | 8:00 | | FB-6-24-22 | 14 | | -001 |
| 6/24 | 8:30 | | MKT-27 | 14 | | -002 |
| 6/24 | 9:00 | | MKT-28 | 14 | | -003 |
| 6/24 | 9:25 | | NAPIS-2 | 14 | | -004 |
| 6/24 | 9:45 | | NAPIS-3 | 14 | | -005 |
| 6/24 | 10:05 | | KA-3 | 14 | | -006 |
| 6/24 | 10:30 | | STP-1 to EP-2 | 16 | | -007 |
| 6/24 | 10:50 | | EP-2 | 16 | | -008 |
| 6/24 | 11:20 | | EP-6 | 16 | | -009 |
| 6/24 | 11:20 | | FB-6-24-22 | 3 | | -010 |
| 6/24 | - | | Duo-6-24-22 | 14 | | -011 |
| Date | Time | Relinquished by: | Relinquished by: | Received by: | Via: | Date |
| 6/24 | 12:30 | Hilario T. 40 | Heidi | Conner | 6-24-22 | 14:57 |
| Date | Time | Relinquished by: | Relinquished by: | Received by: | Via: | Date |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 18, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206F41

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206F41
Date: 7/18/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Analytical Notes Regarding EPA Method 8270:
The recovery for Pyrene in the LCSD was slightly low.

"S" flags denote that the surrogate or spike was outside of the standard limits.

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.010 | 0.0090 | 0.050 | J | mg/L | 1 | 7/2/2022 8:47:00 PM | R89210 |
| Surr: BFB | 97.8 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 8:47:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Acetone | 5.9 | 2.5 | 10 | J | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Chloromethane | 0.41 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Surr: Dibromofluoromethane | 110 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:06:42 AM | B89226 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:06:42 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 8:54:19 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 7/9/2022 10:27:25 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 10:27:25 PM | 68464 |
| Surr: DNOP | 116 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 10:27:25 PM | 68464 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: 2-Fluorophenol | 64.5 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: Phenol-d5 | 47.2 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 61.6 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: Nitrobenzene-d5 | 77.5 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 67.1 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 90.4 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 1:48:33 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 6:13:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 78.3 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 74.1 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 6:13:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 6:13:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:07:37 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:03:04 PM | 68545 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 1:03:04 PM | 68545 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:03:04 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 1:03:04 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:12:12 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:10:00 AM

Lab ID: 2206F41-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| Zinc | 0.0038 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 11:24:26 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:15:16 PM | A89215 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:15:16 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:15:16 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:15:16 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:14:19 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.022 | 0.0090 | 0.050 | J | mg/L | 1 | 7/2/2022 9:06:00 PM | R89210 |
| Surr: BFB | 93.0 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 9:06:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 3.1 | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,2-Dichloroethane (EDC) | 1.1 | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| cis-1,2-DCE | 1.3 | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,1-Dichloroethane | 18 | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,1-Dichloroethene | 1.0 | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Trichloroethene (TCE) | 0.93 | 0.20 | 1.0 | J | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:35:10 AM | B89226 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 7:35:10 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 7/6/2022 9:09:34 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.11 | 0.016 | 0.064 | | mg/L | 1 | 7/9/2022 10:51:11 PM | 68464 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/9/2022 10:51:11 PM | 68464 |
| Surr: DNOP | 109 | 0 | 42.2-138 | | %Rec | 1 | 7/9/2022 10:51:11 PM | 68464 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: 2-Fluorophenol | 57.8 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: Phenol-d5 | 46.2 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 65.3 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: Nitrobenzene-d5 | 74.3 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 91.5 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 2:30:27 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 19 | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 7:05:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 72.3 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 67.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 7:05:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 90.6 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 7:05:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.42 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Beryllium | 0.00090 | 0.00088 | 0.0020 | J | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Chromium | 0.018 | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Nickel | 0.030 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Vanadium | 0.044 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| Zinc | 0.046 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:09:15 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:05:30 PM | 68545 |
| Arsenic | 0.0028 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 1:05:30 PM | 68545 |
| Lead | 0.014 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:05:30 PM | 68545 |
| Selenium | 0.0027 | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 1:05:30 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:16:27 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:15:00 AM

Lab ID: 2206F41-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.035 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Nickel | 0.015 | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Silver | 0.0025 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Vanadium | 0.0041 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| Zinc | 0.0063 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 11:29:15 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:20:39 PM | A89215 |
| Arsenic | 0.00063 | 0.00012 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:20:39 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:20:39 PM | A89215 |
| Selenium | 0.00037 | 0.00034 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:20:39 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:18:36 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.025 | 0.0090 | 0.050 | J | mg/L | 1 | 7/2/2022 9:26:00 PM | R89210 |
| Surr: BFB | 100 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 9:26:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 22 | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Chloromethane | 0.52 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,1-Dichloroethane | 0.94 | 0.27 | 1.0 | J | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 8:03:39 AM | B89226 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 8:03:39 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 9:24:49 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.57 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 12:44:26 PM | 68495 |
| Motor Oil Range Organics (MRO) | 0.57 | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 12:44:26 PM | 68495 |
| Surr: DNOP | 125 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 12:44:26 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: 2-Fluorophenol | 47.3 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: Phenol-d5 | 41.0 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 55.6 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: Nitrobenzene-d5 | 69.4 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 61.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 80.1 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 3:12:58 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 4.5 | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 7:53:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 72.2 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 66.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 7:53:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 84.1 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 7:53:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.26 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Cobalt | 0.0070 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Nickel | 0.024 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Vanadium | 0.0073 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| Zinc | 0.013 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:15:33 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:07:57 PM | 68545 |
| Arsenic | 0.00096 | 0.00013 | 0.0010 | J | mg/L | 1 | 7/7/2022 1:07:57 PM | 68545 |
| Lead | 0.00053 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:07:57 PM | 68545 |
| Selenium | 0.00075 | 0.00037 | 0.0010 | J | mg/L | 1 | 7/7/2022 1:07:57 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:20:45 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 8:40:00 AM

Lab ID: 2206F41-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.16 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Nickel | 0.015 | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Silver | 0.0072 | 0.0013 | 0.0050 | | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Vanadium | 0.0064 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| Zinc | 0.0087 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 11:33:53 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:23:20 PM | A89215 |
| Arsenic | 0.00083 | 0.00012 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:23:20 PM | A89215 |
| Lead | 0.000064 | 0.000057 | 0.00050 | J | mg/L | 1 | 7/1/2022 4:23:20 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:23:20 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:22:54 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.48 | 0.018 | 0.10 | | mg/L | 2 | 7/2/2022 9:45:00 PM | R89210 |
| Surr: BFB | 145 | 0 | 70-130 | S | %Rec | 2 | 7/2/2022 9:45:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 51 | 1.1 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Ethylbenzene | 8.8 | 1.1 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 320 | 2.0 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,2,4-Trimethylbenzene | 1.2 | 0.61 | 5.0 | J | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,1-Dichloroethane | 3.0 | 1.4 | 5.0 | J | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| n-Propylbenzene | 1.0 | 0.91 | 5.0 | J | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 5 | 7/6/2022 8:32:12 AM | B89226 |
| Surr: Toluene-d8 | 98.3 | 0 | 70-130 | | %Rec | 5 | 7/6/2022 8:32:12 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 9:40:15 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 6.0 | 0.032 | 0.13 | | mg/L | 2 | 7/12/2022 3:42:08 PM | 68495 |
| Motor Oil Range Organics (MRO) | 0.67 | 0.10 | 0.16 | | mg/L | 2 | 7/12/2022 3:42:08 PM | 68495 |
| Surr: DNOP | 83.2 | 0 | 42.2-138 | | %Rec | 2 | 7/12/2022 3:42:08 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 36.9-103 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 38.1-99.9 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 48-155 | SD | %Rec | 10 | 7/13/2022 3:55:25 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Chrysene | ND | 2.5 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 7/7/2022 8:39:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 7/7/2022 8:39:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 7/7/2022 8:39:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 1.1 | 0.0079 | 0.015 | | mg/L | 5 | 7/11/2022 11:18:17 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Chromium | 0.0022 | 0.0020 | 0.0060 | J | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Cobalt | 0.010 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Nickel | 0.18 | 0.0053 | 0.010 | * | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Vanadium | 0.037 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| Zinc | 0.029 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:17:00 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:10:23 PM | 68545 |
| Arsenic | 0.0060 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 1:10:23 PM | 68545 |
| Lead | 0.0073 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:10:23 PM | 68545 |
| Selenium | 0.0014 | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 1:10:23 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:25:04 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:10:00 AM

Lab ID: 2206F41-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.91 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Cadmium | 0.0011 | 0.00098 | 0.0020 | J | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Cobalt | 0.0051 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Nickel | 0.18 | 0.0033 | 0.010 | * | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Silver | 0.0029 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Vanadium | 0.023 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| Zinc | 0.032 | 0.0032 | 0.010 | | mg/L | 1 | 6/30/2022 11:38:39 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 7/1/2022 4:26:02 PM | A89215 |
| Arsenic | 0.0055 | 0.00061 | 0.0050 | | mg/L | 5 | 7/1/2022 4:26:02 PM | A89215 |
| Lead | 0.0053 | 0.00028 | 0.0025 | | mg/L | 5 | 7/1/2022 4:26:02 PM | A89215 |
| Selenium | 0.0018 | 0.0017 | 0.0050 | J | mg/L | 5 | 7/1/2022 4:26:02 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:27:14 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NM

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:35:00 AM

Lab ID: 2206F41-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 7/2/2022 10:05:00 PM | R89210 |
| Surr: BFB | 92.5 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 10:05:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 0.41 | 0.39 | 1.0 | J | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Chloromethane | 0.44 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Surr: Dibromofluoromethane | 118 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:00:45 AM | B89226 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:00:45 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NM

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:35:00 AM

Lab ID: 2206F41-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 9:55:33 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NM

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:35:00 AM

Lab ID: 2206F41-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.17 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 2:44:09 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 2:44:09 PM | 68495 |
| Surr: DNOP | 98.7 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 2:44:09 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: 2-Fluorophenol | 56.2 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: Phenol-d5 | 42.8 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: 2,4,6-Tribromophenol | 60.4 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: Nitrobenzene-d5 | 69.0 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 60.2 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 77.3 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 4:38:05 PM | 68468 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.22 | 0.11 | 1.0 | J | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 9:26:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NM

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:35:00 AM

Lab ID: 2206F41-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 73.9 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Surr: 2-Fluorobiphenyl | 66.2 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 9:26:00 PM | 68468 |
| Surr: 4-Terphenyl-d14 | 83.0 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 9:26:00 PM | 68468 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206F41-005D

Client Sample ID: STP-1-NM

Collection Date: 6/28/2022 9:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.099 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Vanadium | 0.038 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:19:52 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:12:50 PM | 68545 |
| Arsenic | 0.0026 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 1:12:50 PM | 68545 |
| Lead | 0.00063 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:12:50 PM | 68545 |
| Selenium | 0.0046 | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 1:12:50 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 11:29:22 AM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NM

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 9:35:00 AM

Lab ID: 2206F41-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.070 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Vanadium | 0.039 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| Zinc | 0.0089 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 11:43:12 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:28:43 PM | A89215 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:28:43 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:28:43 PM | A89215 |
| Selenium | 0.0078 | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:28:43 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:28:50 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 2.8 | 0.0090 | 0.050 | | mg/L | 1 | 7/2/2022 10:25:00 PM | R89210 |
| Surr: BFB | 261 | 0 | 70-130 | S | %Rec | 1 | 7/2/2022 10:25:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 690 | 4.5 | 20 | | µg/L | 20 | 7/6/2022 5:35:49 PM | R89293 |
| Toluene | 1.5 | 0.40 | 2.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Ethylbenzene | 33 | 0.43 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | ND | 0.79 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,2,4-Trimethylbenzene | 25 | 0.24 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,3,5-Trimethylbenzene | 18 | 0.36 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,2-Dichloroethane (EDC) | 0.92 | 0.51 | 2.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Acetone | 11 | 5.0 | 20 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 2-Butanone | 4.7 | 4.1 | 20 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Chloromethane | 2.2 | 0.82 | 6.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| cis-1,2-DCE | 0.94 | 0.78 | 2.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,1-Dichloroethane | 1.1 | 0.55 | 2.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.40 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Isopropylbenzene | 6.8 | 0.37 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 4-Isopropyltoluene | 4.4 | 0.40 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| n-Propylbenzene | 2.1 | 0.36 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| sec-Butylbenzene | 0.95 | 0.29 | 2.0 | J | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Xylenes, Total | 85 | 0.74 | 3.0 | | µg/L | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 86.6 | 0 | 70-130 | | %Rec | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 2 | 7/6/2022 9:29:20 AM | B89226 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 2 | 7/6/2022 9:29:20 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 10:10:55 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|---------------------|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | Analyst: SB | | |
| Diesel Range Organics (DRO) | 2.0 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 3:08:06 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 3:08:06 PM | 68495 |
| Surr: DNOP | 97.3 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 3:08:06 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | Analyst: JME | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: 2-Fluorophenol | 45.4 | 0 | 29.4-87.7 | | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | S | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 58.4 | 0 | 18.6-129 | | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: Nitrobenzene-d5 | 60.5 | 0 | 36.9-103 | | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 55.2 | 0 | 38.1-99.9 | | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 68.9 | 0 | 48-155 | | %Rec | 1 | 7/8/2022 3:36:46 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | 16 | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Naphthalene | 2.8 | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| 1-Methylnaphthalene | 0.96 | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| 2-Methylnaphthalene | 0.42 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Fluorene | 0.16 | 0.095 | 0.30 | J | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 1:38:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.7 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 53.5 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 1:38:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 66.1 | 0 | 72.3-147 | S | %Rec | 1 | 7/7/2022 1:38:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 2.1 | 0.0079 | 0.015 | * | mg/L | 5 | 7/11/2022 11:22:37 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Chromium | 0.014 | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Nickel | 0.020 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Vanadium | 0.032 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| Zinc | 0.043 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:21:16 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:15:16 PM | 68545 |
| Arsenic | 0.010 | 0.00013 | 0.0010 | * | mg/L | 1 | 7/7/2022 1:15:16 PM | 68545 |
| Lead | 0.015 | 0.000061 | 0.00050 | * | mg/L | 1 | 7/7/2022 1:15:16 PM | 68545 |
| Selenium | 0.0024 | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 1:15:16 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:30:58 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:00:00 AM

Lab ID: 2206F41-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.12 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Nickel | 0.0068 | 0.0033 | 0.010 | J | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Silver | 0.0021 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Vanadium | 0.0040 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 6/30/2022 11:54:51 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:31:24 PM | A89215 |
| Arsenic | 0.0063 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:31:24 PM | A89215 |
| Lead | 0.0010 | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:31:24 PM | A89215 |
| Selenium | 0.00058 | 0.00034 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:31:24 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:37:22 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.38 | 0.0090 | 0.050 | | mg/L | 1 | 7/2/2022 10:44:00 PM | R89210 |
| Surr: BFB | 441 | 0 | 70-130 | S | %Rec | 1 | 7/2/2022 10:44:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 1.2 | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 62 | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,2,4-Trimethylbenzene | 0.25 | 0.12 | 1.0 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,2-Dichloroethane (EDC) | 5.5 | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Acetone | 7.5 | 2.5 | 10 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 2-Butanone | 2.6 | 2.0 | 10 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Chloromethane | 1.4 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,1-Dichloroethane | 0.74 | 0.27 | 1.0 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Isopropylbenzene | 28 | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| n-Butylbenzene | 1.2 | 0.25 | 3.0 | J | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| n-Propylbenzene | 1.1 | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| sec-Butylbenzene | 6.5 | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 113 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 94.4 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:57:52 AM | B89226 |
| Surr: Toluene-d8 | 99.4 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 9:57:52 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206F41-007B

Client Sample ID: OW-70

Collection Date: 6/28/2022 10:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 10:26:25 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.97 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 3:32:11 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 3:32:11 PM | 68495 |
| Surr: DNOP | 99.4 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 3:32:11 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: 2-Fluorophenol | 43.7 | 0 | 29.4-87.7 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: Phenol-d5 | 32.4 | 0 | 28.5-64.7 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 60.9 | 0 | 18.6-129 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: Nitrobenzene-d5 | 53.1 | 0 | 36.9-103 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 49.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 71.2 | 0 | 48-155 | | %Rec | 1 | 7/8/2022 4:19:25 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.70 | 0.11 | 1.0 | J | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Acenaphthene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Phenanthrene | 0.62 | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 2:26:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 64.0 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 56.6 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 2:26:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 78.2 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 2:26:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.83 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Chromium | 0.0061 | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Cobalt | 0.0099 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Nickel | 0.050 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Vanadium | 0.013 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| Zinc | 0.017 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:23:56 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:17:43 PM | 68545 |
| Arsenic | 0.0024 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 1:17:43 PM | 68545 |
| Lead | 0.0020 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 1:17:43 PM | 68545 |
| Selenium | 0.00051 | 0.00037 | 0.0010 | J | mg/L | 1 | 7/7/2022 1:17:43 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:39:30 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.54 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Cobalt | 0.0053 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Nickel | 0.045 | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Vanadium | 0.0018 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| Zinc | 0.0097 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 11:59:35 AM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:34:06 PM | A89215 |
| Arsenic | 0.0010 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:34:06 PM | A89215 |
| Lead | 0.00013 | 0.000057 | 0.00050 | J | mg/L | 1 | 7/1/2022 4:34:06 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:34:06 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:41:39 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.025 | 0.0090 | 0.050 | J | mg/L | 1 | 7/2/2022 11:04:00 PM | R89210 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 11:04:00 PM | R89210 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Methyl tert-butyl ether (MTBE) | 22 | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Chloromethane | 0.47 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,1-Dichloroethane | 0.91 | 0.27 | 1.0 | J | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 10:26:25 AM | B89226 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 10:26:25 AM | B89226 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 10:41:48 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.32 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 3:56:16 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 3:56:16 PM | 68495 |
| Surr: DNOP | 89.2 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 3:56:16 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: 2-Fluorophenol | 38.2 | 0 | 29.4-87.7 | | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: Phenol-d5 | 37.6 | 0 | 28.5-64.7 | | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 15.6 | 0 | 18.6-129 | S | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: Nitrobenzene-d5 | 67.5 | 0 | 36.9-103 | | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 62.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 75.9 | 0 | 48-155 | | %Rec | 1 | 7/8/2022 5:01:57 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.0 | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 3:12:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.8 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 56.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 3:12:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 71.2 | 0 | 72.3-147 | S | %Rec | 1 | 7/7/2022 3:12:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.25 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Cobalt | 0.0086 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Nickel | 0.024 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Vanadium | 0.0072 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| Zinc | 0.0082 | 0.0039 | 0.010 | J | mg/L | 1 | 7/11/2022 11:25:19 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 1:20:09 PM | 68545 |
| Arsenic | 0.00095 | 0.00013 | 0.0010 | J | mg/L | 1 | 7/7/2022 1:20:09 PM | 68545 |
| Lead | 0.00040 | 0.000061 | 0.00050 | J | mg/L | 1 | 7/7/2022 1:20:09 PM | 68545 |
| Selenium | 0.00041 | 0.00037 | 0.0010 | J | mg/L | 1 | 7/7/2022 1:20:09 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:43:47 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022

Lab ID: 2206F41-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.15 | 0.0011 | 0.0020 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Nickel | 0.015 | 0.0033 | 0.010 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Silver | 0.0066 | 0.0013 | 0.0050 | | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Vanadium | 0.0064 | 0.0017 | 0.050 | J | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| Zinc | 0.0086 | 0.0032 | 0.010 | J | mg/L | 1 | 6/30/2022 12:04:17 PM | B89154 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:36:47 PM | A89215 |
| Arsenic | 0.00080 | 0.00012 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:36:47 PM | A89215 |
| Lead | 0.000061 | 0.000057 | 0.00050 | J | mg/L | 1 | 7/1/2022 4:36:47 PM | A89215 |
| Selenium | 0.00090 | 0.00034 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:36:47 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:45:56 PM | 68621 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-28-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/28/2022 10:20:00 AM

Lab ID: 2206F41-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Acetone | 6.4 | 2.5 | 10 | J | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Chloromethane | 0.50 | 0.41 | 3.0 | J | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:04:29 PM | R89293 |
| Surr: Toluene-d8 | 99.7 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:04:29 PM | R89293 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206F41-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Acetone | 3.2 | 2.5 | 10 | J | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206F41-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:33:08 PM | R89293 |
| Surr: Toluene-d8 | 97.4 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 6:33:08 PM | R89293 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206F41-010B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 10:57:11 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206F41

Date Reported: 7/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206F41-010C

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 7/2/2022 11:24:00 PM | R89210 |
| Surr: BFB | 96.6 | 0 | 70-130 | | %Rec | 1 | 7/2/2022 11:24:00 PM | R89210 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

July 12, 2022

Hall Environmental Analysis Laboratory

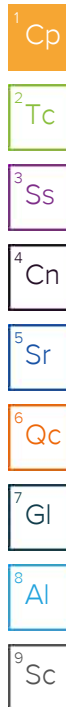
Sample Delivery Group: L1511088

Samples Received: 07/02/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2206F41-001F EB-6-28-22 L1511088-01 | 5 | |
| 2206F41-002F MKTF-30 L1511088-02 | 6 | <div><div>4</div>Cn</div> |
| 2206F41-003F MKTF-29 L1511088-03 | 7 | <div><div>5</div>Sr</div> |
| 2206F41-004F OPIS-1 L1511088-04 | 8 | |
| 2206F41-005F STP-1-NM L1511088-05 | 9 | <div><div>6</div>Qc</div> |
| 2206F41-006F OW-12A L1511088-06 | 10 | |
| 2206F41-007F OW-70 L1511088-07 | 11 | <div><div>7</div>Gl</div> |
| 2206F41-008F DUP-6-28-22 L1511088-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 4500CN E-2016 | 13 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 15 | |
| Al: Accreditations & Locations | 16 | |
| Sc: Sample Chain of Custody | 17 | |

2206F41-001F EB-6-28-22 L1511088-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:10 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 08:10
07/02/22 09:15

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

2206F41-002F MKTF-30 L1511088-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:11 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 08:15
07/02/22 09:15

2206F41-003F MKTF-29 L1511088-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:12 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 08:40
07/02/22 09:15

2206F41-004F OPIS-1 L1511088-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:13 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 09:10
07/02/22 09:15

2206F41-005F STP-1-NM L1511088-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:14 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 09:35
07/02/22 09:15

2206F41-006F OW-12A L1511088-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:15 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 10:00
07/02/22 09:15

2206F41-007F OW-70 L1511088-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1891839 | 1 | 07/08/22 10:09 | 07/11/22 23:16 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/28/22 10:20
07/02/22 09:15

2206F41-008F DUP-6-28-22 L1511088-08 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889907 | 1 | 07/06/22 07:17 | 07/10/22 20:58 | CAT | Mt. Juliet, TN |

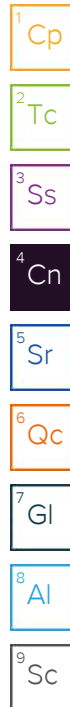
Collected by
Collected date/time
Received date/time

06/28/22 00:00
07/02/22 09:15

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 07/11/2022 23:10 | WG1891839 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 2.91 | J | 1.80 | 5.00 | 1 | 07/11/2022 23:11 | WG1891839 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 6.31 | | 1.80 | 5.00 | 1 | 07/11/2022 23:12 | WG1891839 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/28/22 09:10

L1511088

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 64.0 | | 1.80 | 5.00 | 1 | 07/11/2022 23:13 | WG1891839 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 55.6 | | 1.80 | 5.00 | 1 | 07/11/2022 23:14 | WG1891839 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 2.42 | J | 1.80 | 5.00 | 1 | 07/11/2022 23:15 | WG1891839 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 4.04 | J | 1.80 | 5.00 | 1 | 07/11/2022 23:16 | WG1891839 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/28/22 00:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 6.92 | | 1.80 | 5.00 | 1 | 07/10/2022 20:58 | WG1889907 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3812980-1 07/10/22 20:28

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1509933-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1509933-02 07/10/22 20:41 • (DUP) R3812980-5 07/10/22 20:42

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1510125-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1510125-02 07/10/22 20:44 • (DUP) R3812980-6 07/10/22 20:45

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3812980-2 07/10/22 20:30

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 96.8 | 96.8 | 87.1-120 | |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3813413-1 07/11/22 22:44

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1509878-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1509878-01 07/11/22 22:51 • (DUP) R3813413-3 07/11/22 22:52

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1510506-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1510506-02 07/11/22 23:03 • (DUP) R3813413-6 07/11/22 23:04

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 2.55 | U | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3813413-2 07/11/22 22:45

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 93.8 | 93.8 | 87.1-120 | |

L1510501-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1510501-01 07/11/22 23:00 • (MS) R3813413-4 07/11/22 23:01 • (MSD) R3813413-5 07/11/22 23:02

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 66.7 | 91.4 | 66.7 | 91.4 | 1 | 90.0-110 | J6 | J3 | 31.2 | 20 |

L1511088-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511088-07 07/11/22 23:16 • (MS) R3813413-7 07/11/22 23:17 • (MSD) R3813413-8 07/11/22 23:20

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | 4.04 | 101 | 101 | 97.0 | 97.0 | 1 | 90.0-110 | | | 0.000 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

| | |
|---|----|
| 1 | Cp |
| 2 | Tc |
| 3 | Ss |
| 4 | Cn |
| 5 | Sr |
| 6 | Qc |
| 7 | Gl |
| 8 | Al |
| 9 | Sc |

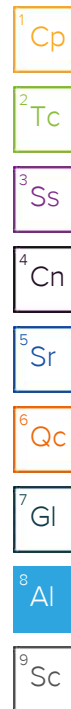
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

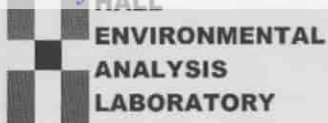
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

L1511088

| | | | |
|---|----------|------------------------------|----------------------------|
| SLIB CONTRACTOR: Pace TN | COMPANY: | PHONE: (800) 767-5859 | FAX: (615) 758-5859 |
| ADDRESS: 12065 Lebanon Rd | | ACCOUNT #: | EMAIL: |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|-----------------------|--------------|-----------------------------|
| 1 | 2206F41-001F | EB-6-28-22 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 8:10:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2206F41-002F | MKTF-30 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 8:15:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2206F41-003F | MKTF-29 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 8:40:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2206F41-004F | OPIS-1 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 9:10:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2206F41-005F | STP-1-NM | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 9:35:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2206F41-006F | OW-12A | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 10:00:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2206F41-007F | OW-70 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 10:20:00 AM | 1 | Total Cyanide J and MDL -07 |
| 8 | 2206F41-008F | DUP-6-28-22 | 500AMBHDP
F-NAOH | Groundw
ater | 6/28/2022 | 1 | Total Cyanide J and MDL -08 |

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☒ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|------------------------|----------------------|---------------------------------|---------------------|-------------------|---|
| Relinquished By: cmc | Date: 6/29/2022 | Time: 9:09 AM | Received By: [Signature] | Date: 7/1/22 | Time: 9:15 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68545 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176277 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-68545 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176278 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0030 | 0.002000 | 0 | 108 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.2 | 50 | 150 | | | J |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 97.2 | 50 | 150 | | | J |
| Cobalt | 0.0055 | 0.0060 | 0.006000 | 0 | 91.2 | 50 | 150 | | | J |
| Nickel | 0.0066 | 0.010 | 0.005000 | 0 | 132 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 93.9 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 119 | 50 | 150 | | | |

| Sample ID: LCS-68545 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176279 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.4 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 90.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B89154 | RunNo: 89154 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3168576 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B89154 | RunNo: 89154 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3168577 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.9 | 50 | 150 | | | J |
| Cadmium | 0.0024 | 0.0020 | 0.002000 | 0 | 121 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 99.8 | 50 | 150 | | | J |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 104 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.1 | 50 | 150 | | | J |
| Vanadium | 0.0093 | 0.050 | 0.01000 | 0 | 92.8 | 50 | 150 | | | J |
| Zinc | 0.0093 | 0.010 | 0.01000 | 0 | 92.8 | 50 | 150 | | | J |

| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B89154 | RunNo: 89154 | | | | | | | | |
| Prep Date: | Analysis Date: 6/30/2022 | SeqNo: 3168578 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0020 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 95.0 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.8 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.6 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68545 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175614 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|--------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68545 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175615 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.1 | 50 | 150 | | | J |
| Selenium | 0.00096 | 0.0010 | 0.001000 | 0 | 96.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|------------------------------------|-----------------------|----------|-----------|--------------------|----------|------|
| Sample ID: MSLCS-68545 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3175616 | | | Units: mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.5 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.6 | 85 | 115 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 89.4 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171349 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171350 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.00099 | 0.0010 | 0.001000 | 0 | 98.9 | 50 | 150 | | | J |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171351 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.4 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206F41-001EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB-6-28-22 | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171362 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.2 | 70 | 130 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68621 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 68621 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177687 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68621 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68621 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177688 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00011 | 0.00020 | 0.0001500 | 0 | 76.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68621 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 68621 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177689 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0048 | 0.00020 | 0.005000 | 0 | 95.9 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206F41-006DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-12A | Batch ID: 68621 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177725 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0045 | 0.00020 | 0.005000 | 0 | 90.8 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206F41-006DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-12A | Batch ID: 68621 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177726 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0047 | 0.00020 | 0.005000 | 0 | 93.1 | 75 | 125 | 2.54 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-68566 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 68566 | | | RunNo: 89272 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | | | SeqNo: 3174557 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.076 | 0.010 | 0.1000 | 0 | 76.3 | 70 | 130 | 10.9 | 20 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175380 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-68566 | SampType: LCS | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175381 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 99.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175387 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|--------------------------------|--------------------------|--|
| Sample ID: MB-68495 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: PBW | Batch ID: 68495 | RunNo: 89367 |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | SeqNo: 3179031 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.023 | 0.064 J |
| Motor Oil Range Organics (MRO) | ND | 0.080 |
| Surr: DNOP | 0.038 | 0.03750 101 42.2 138 |

| | | |
|--------------------------------|-------------------------|--|
| Sample ID: MB-68464 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: PBW | Batch ID: 68464 | RunNo: 89260 |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | SeqNo: 3179323 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.037 | 0.064 J |
| Motor Oil Range Organics (MRO) | ND | 0.080 |
| Surr: DNOP | 0.038 | 0.03750 101 42.2 138 |

| | | |
|-----------------------------|-------------------------|--|
| Sample ID: LCS-68464 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: LCSW | Batch ID: 68464 | RunNo: 89260 |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | SeqNo: 3179324 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.16 | 0.064 0.1875 0 83.6 31.7 75.4 S |
| Surr: DNOP | 0.021 | 0.01875 111 42.2 138 |

| | | |
|-----------------------------|-------------------------|--|
| Sample ID: LCSD-68464 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: LCSS02 | Batch ID: 68464 | RunNo: 89260 |
| Prep Date: 6/30/2022 | Analysis Date: 7/9/2022 | SeqNo: 3179325 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 0.1875 0 69.2 31.7 75.4 18.9 20 |
| Surr: DNOP | 0.021 | 0.01875 111 42.2 138 0 0 |

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: LCS-68495 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range |
| Client ID: LCSW | Batch ID: 68495 | RunNo: 89367 |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | SeqNo: 3180276 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 0.1875 0 75.5 31.7 75.4 S |
| Surr: DNOP | 0.020 | 0.01875 107 42.2 138 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68495 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68495 | | RunNo: 89367 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | | SeqNo: 3180277 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 78.6 | 31.7 | 75.4 | 3.96 | 20 | S |
| Surr: DNOP | 0.019 | | 0.01875 | | 103 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R89210 | | RunNo: 89210 | | | | | | | |
| Prep Date: | Analysis Date: 7/2/2022 | | SeqNo: 3171060 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 100 | 80 | 120 | | | |
| Surr: BFB | 41 | | 20.00 | | 206 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R89210 | | RunNo: 89210 | | | | | | | |
| Prep Date: | Analysis Date: 7/2/2022 | | SeqNo: 3171061 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 98.1 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: B89226 | | RunNo: 89226 | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | | SeqNo: 3172953 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: B89226 | | RunNo: 89226 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3173017 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: B89226 | RunNo: 89226 | | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | SeqNo: 3173017 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 12 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 118 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R89293 | RunNo: 89293 | | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | SeqNo: 3175685 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 106 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R89293 | RunNo: 89293 | | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | SeqNo: 3175727 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89293 | RunNo: 89293 | | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | SeqNo: 3175727 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89293 | | | RunNo: 89293 | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | | SeqNo: 3175727 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68493 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68493 | RunNo: 89329 | | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | SeqNo: 3179690 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 43 | | 200.0 | | 21.7 | 29.4 | 87.7 | | | S |
| Surr: Phenol-d5 | 33 | | 200.0 | | 16.7 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 64 | | 200.0 | | 32.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 26 | | 100.0 | | 26.2 | 36.9 | 103 | | | S |
| Surr: 2-Fluorobiphenyl | 28 | | 100.0 | | 27.6 | 38.1 | 99.9 | | | S |
| Surr: 4-Terphenyl-d14 | 52 | | 100.0 | | 51.7 | 48 | 155 | | | |

| Sample ID: LCS-68493 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68493 | RunNo: 89329 | | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | SeqNo: 3179691 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68493 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179691 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 63.3 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 55 | 5.0 | 100.0 | 0 | 54.5 | 15 | 89.8 | | | |
| Phenol | 83 | 20 | 200.0 | 0 | 41.5 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 75.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 51.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.7 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.8 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.8 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.6 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68493 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179692 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 37 | 10 | 100.0 | 0 | 36.8 | 21.3 | 104 | 53.0 | 45.3 | R |
| 1,4-Dichlorobenzene | 33 | 5.0 | 100.0 | 0 | 32.9 | 15 | 89.8 | 49.3 | 39.6 | R |
| Phenol | 47 | 20 | 200.0 | 0 | 23.4 | 17 | 61.1 | 55.7 | 42.5 | R |
| Pyrene | 55 | 10 | 100.0 | 0 | 55.4 | 61 | 123 | 30.2 | 11.8 | RS |
| Surr: 2-Fluorophenol | 60 | | 200.0 | | 29.9 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 44 | | 200.0 | | 21.9 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.2 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 39 | | 100.0 | | 39.3 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 36 | | 100.0 | | 36.5 | 38.1 | 99.9 | 0 | 0 | S |
| Surr: 4-Terphenyl-d14 | 60 | | 100.0 | | 60.0 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68468 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68468 | | RunNo: 89411 | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | SeqNo: 3183125 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68468 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68468 | | | RunNo: 89411 | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | | SeqNo: 3183125 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 62.3 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 95 | | 200.0 | | 47.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 56.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 77 | | 100.0 | | 77.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 68.6 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 96 | | 100.0 | | 96.4 | 48 | 155 | | | |

| Sample ID: LCS-68468 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68468 | | | RunNo: 89411 | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | | | SeqNo: 3183126 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 76 | 10 | 100.0 | 0 | 75.6 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 64 | 5.0 | 100.0 | 0 | 63.5 | 15 | 89.8 | | | |
| Phenol | 99 | 20 | 200.0 | 0 | 49.6 | 17 | 61.1 | | | |
| Pyrene | 97 | 10 | 100.0 | 0 | 96.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 62.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 95 | | 200.0 | | 47.3 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 62.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 82 | | 100.0 | | 81.8 | 36.9 | 103 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|--|
| Sample ID: LCS-68468 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | | |
| Client ID: LCSW | Batch ID: 68468 | RunNo: 89411 | | | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | SeqNo: 3183126 | Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.5 | 38.1 | 99.9 | | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 102 | 48 | 155 | | | | |

| | | | | | | | | | | | |
|------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|--|
| Sample ID: LCSD-68468 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68468 | RunNo: 89411 | | | | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/13/2022 | SeqNo: 3183127 | Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Acenaphthene | 41 | 10 | 100.0 | 0 | 41.3 | 21.3 | 104 | 58.7 | 45.3 | R | |
| 1,4-Dichlorobenzene | 36 | 5.0 | 100.0 | 0 | 36.0 | 15 | 89.8 | 55.4 | 39.6 | R | |
| Phenol | 54 | 20 | 200.0 | 0 | 26.9 | 17 | 61.1 | 59.2 | 42.5 | R | |
| Pyrene | 80 | 10 | 100.0 | 0 | 79.8 | 61 | 123 | 19.2 | 11.8 | R | |
| Surr: 2-Fluorophenol | 69 | | 200.0 | | 34.3 | 29.4 | 87.7 | 0 | 0 | | |
| Surr: Phenol-d5 | 51 | | 200.0 | | 25.4 | 28.5 | 64.7 | 0 | 0 | S | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 54.5 | 18.6 | 129 | 0 | 0 | | |
| Surr: Nitrobenzene-d5 | 45 | | 100.0 | | 44.9 | 36.9 | 103 | 0 | 0 | | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 41.8 | 38.1 | 99.9 | 0 | 0 | | |
| Surr: 4-Terphenyl-d14 | 77 | | 100.0 | | 77.4 | 48 | 155 | 0 | 0 | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-68493 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68493 | RunNo: 89275 | | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174754 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 33 | | 100.0 | | 33.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 73 | | 200.0 | | 36.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 38 | | 100.0 | | 38.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 81 | | 100.0 | | 80.5 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-68493 If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68493 | RunNo: 89275 | | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/7/2022 | SeqNo: 3174755 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.98 | 0.10 | 2.000 | 0 | 49.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 102 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 104 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 78.0 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: lcs-68493 lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68493 | | RunNo: 89275 | | | | | | |
| Prep Date: 7/1/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3174755 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 83 | | 100.0 | | 83.1 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: lcsd-68493 lf | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | | Batch ID: 68493 | | | RunNo: 89275 | | | | | |
| Prep Date: 7/1/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3174756 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.42 | 0.10 | 2.000 | 0 | 21.0 | 20.2 | 48.4 | 86.5 | 30.1 | R |
| Naphthalene | 0.60 | 0.30 | 2.000 | 0 | 30.0 | 21.3 | 79.9 | 87.9 | 25.6 | R |
| 1-Methylnaphthalene | 0.64 | 0.30 | 2.000 | 0 | 32.0 | 22.2 | 80.3 | 80.4 | 25 | R |
| 2-Methylnaphthalene | 0.66 | 0.30 | 2.000 | 0 | 33.0 | 20.6 | 80.1 | 76.6 | 25 | R |
| Acenaphthene | 0.70 | 0.30 | 2.000 | 0 | 35.0 | 29.8 | 82.7 | 80.3 | 27.8 | R |
| Fluorene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 33.3 | 86 | 56.5 | 26.4 | R |
| Phenanthrene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 38.2 | 93.9 | 33.3 | 27.9 | R |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 41.1 | 95.6 | 4.60 | 25.6 | |
| Fluoranthene | 2.2 | 0.30 | 2.000 | 0 | 108 | 52.9 | 123 | 8.70 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | 2.33 | 20 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 103 | 51 | 147 | 6.00 | 24.1 | |
| Chrysene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 55.3 | 115 | 34.7 | 20 | R |
| Benzo(b)fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 44.4 | 136 | 13.3 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 107 | 31.4 | 165 | 17.3 | 21.1 | |
| Surr: Nitrobenzene-d5 | 35 | | 100.0 | | 35.0 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 80 | | 200.0 | | 39.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 33.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 57 | | 100.0 | | 56.5 | 72.3 | 147 | 0 | 0 | S |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: mb-68468 | | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: PBW | | Batch ID: 68468 | | | RunNo: 89400 | | | | | |
| Prep Date: 6/30/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3180358 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: mb-68468 | | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: PBW | | Batch ID: 68468 | | | RunNo: 89400 | | | | | |
| Prep Date: 6/30/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3180358 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 69.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 96 | | 100.0 | | 96.1 | 72.3 | 147 | | | |

| Sample ID: LCS-68468 LF | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|--------|--------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSW | | Batch ID: 68468 | | RunNo: 89400 | | | | | | |
| Prep Date: 6/30/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3180359 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 101 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 105 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 115 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 87.9 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206F41

18-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: Icsd-68468 If | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68468 | | | RunNo: 89400 | | | | | | |
| Prep Date: 6/30/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3180360 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.94 | 0.10 | 2.000 | 0 | 47.0 | 20.2 | 48.4 | 0 | 30.1 | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 21.3 | 79.9 | 1.55 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 20.6 | 80.1 | 1.60 | 25 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 29.8 | 82.7 | 1.38 | 27.8 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 33.3 | 86 | 2.56 | 26.4 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 38.2 | 93.9 | 4.76 | 27.9 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 41.1 | 95.6 | 4.55 | 25.6 | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 52.9 | 123 | 5.08 | 22.8 | |
| Pyrene | 1.6 | 1.0 | 2.000 | 0 | 82.0 | 51 | 113 | 5.92 | 20 | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 51 | 147 | 10.0 | 24.1 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 55.3 | 115 | 11.9 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 44.4 | 136 | 10.8 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 31.4 | 165 | 15.0 | 21.1 | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 48.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.9 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206F41**

RcptNo: 1

Received By: **Cheyenne Cason** 6/29/2022 7:35:00 AMCompleted By: **Cheyenne Cason** 6/29/2022 9:09:56 AMReviewed By: *6-29-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☒ *see 6/29/22*
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☒ *see 6/29/22*
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: *6*
(2 or 12 unless noted)

Adjusted? *yes*Checked by: *see 6/29/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: *added ~0.5mL HNO₃ to sample 0041D, checked for pH*

17. Cooler Information *001B received in incorrect container see 6/29/22*

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.1 | Good | Not Present | | | |
| 2 | 5.2 | Good | Not Present | | | |
| 3 | 2.1 | Good | Not Present | | | |
| 4 | 4.5 | Good | Not Present | | | |

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]
$$\begin{array}{l} 5.1 - 0 = 5.1 \\ 5.2 - 0 = 5.2 \\ 2.1 - 0 = 2.1 \\ 4.5 - 0 = 4.5 \end{array}$$

| | | | |
|--|-------|---|--------------------------------|
| Client: Marathon Gallup Refinery | | X Standard Rush | |
| Mailing Address: 92 Giant Crossing Road
Jamestown, NM, 87347 | | Project Name: | |
| Phone #: 808-640-1823 | | 2022 GW Sampling 2nd Quarter | |
| Email or Fax#: | | Project #: 697-080-001 | |
| QA/QC Package: X Standard ☐ Level 4 (Full Validation) | | Project Manager:
Lesli Alexander/Mackensie Swift | |
| Accreditation: ☐ Az Compliance ☐ NELAC | | Sampler: | |
| X EDD (Type) | | On Ice: ☒ Yes ☐ No | |
| | | # of Coolers: 4 | |
| | | Cooler Temp (including CF): see bank | |
| Date | Time | Matrix | Sample Name |
| 6/28 | 8:10 | | EB-6-28-22 |
| 6/28 | 8:15 | | MKT-36 |
| 6/28 | 8:40 | | MKT-29 |
| 6/28 | 9:10 | | OPTS-1 |
| 6/28 | 9:35 | | STP-1-NM |
| 6/28 | 10:00 | | OW-12A |
| 6/28 | 10:20 | | OW-70 |
| 6/28 | — | | DUP-6-28-22 |
| 6/28 | 10:26 | | FB-6-28-22 |
| Date | | Time | Relinquished by: Hilario Trejo |
| 6/28 | 11:30 | | |
| Date | Time | Relinquished by: | |
| | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 27, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 2nd Qtr

OrderNo.: 2206G22

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/30/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206G22
Date: 7/27/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Qtr

Analytical Notes Regarding EPA Method 8270:

Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270SIMS, depending which method needs the least dilution.

"S" denote a flagged surrogate or spike recovery outside of the standard limits.

The laboratory control spike duplicate (LCSD) for Method 8270 had a low recovery for pyrene. The laboratory control spike (LCS) had acceptable recovery.

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:00:00 AM

Lab ID: 2206G22-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 7/6/2022 12:10:53 PM | G89271 |
| Surr: BFB | 96.1 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 12:10:53 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Acetone | 8.6 | 2.5 | 10 | J | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 12:48:00 AM | R89230 |
| Surr: Toluene-d8 | 98.4 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 12:48:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:00:00 AM

Lab ID: 2206G22-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 7:52:56 PM | 68565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:00:00 AM

Lab ID: 2206G22-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | Analyst: SB |
| Diesel Range Organics (DRO) | 0.025 | 0.016 | 0.064 | J | mg/L | 1 | 7/11/2022 4:20:27 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 4:20:27 PM | 68495 |
| Surr: DNOP | 105 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 4:20:27 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | Analyst: JME |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: 2-Fluorophenol | 48.0 | 0 | 29.4-87.7 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: Phenol-d5 | 34.9 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 53.1 | 0 | 18.6-129 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: Nitrobenzene-d5 | 64.4 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 60.1 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 81.9 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 2:23:48 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | | Analyst: DAM |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 3:56:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** EB-6-29-22**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022 8:00:00 AM**Lab ID:** 2206G22-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.9 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 66.1 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 3:56:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 96.7 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 3:56:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:00:00 AM

Lab ID: 2206G22-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:26:54 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcb | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:13:56 PM | 68545 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:13:56 PM | 68545 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:13:56 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:13:56 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:48:06 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:00:00 AM

Lab ID: 2206G22-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 7/12/2022 10:23:25 AM | C89417 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| Zinc | 0.0098 | 0.0032 | 0.010 | J | mg/L | 1 | 7/5/2022 2:02:44 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:44:53 PM | A89215 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:44:53 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:44:53 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:44:53 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:54:30 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Qtr
Lab ID: 2206G22-002A

Client Sample ID: MKTF-44
Collection Date: 6/29/2022 8:30:00 AM
Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 7/6/2022 12:34:29 PM | G89271 |
| Surr: BFB | 95.4 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 12:34:29 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 1:11:00 AM | R89230 |
| Surr: Toluene-d8 | 96.0 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 1:11:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:30:00 AM

Lab ID: 2206G22-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 8:08:16 PM | 68565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Qtr
Lab ID: 2206G22-002C

Client Sample ID: MKTF-44
Collection Date: 6/29/2022 8:30:00 AM
Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | Analyst: SB |
| Diesel Range Organics (DRO) | 0.042 | 0.016 | 0.064 | J | mg/L | 1 | 7/11/2022 4:44:29 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 4:44:29 PM | 68495 |
| Surr: DNOP | 92.1 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 4:44:29 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | Analyst: JME |
| Benzoic acid | ND | 180 | 200 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Di-n-butyl phthalate | ND | 77 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Di-n-octyl phthalate | ND | 120 | 200 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Diethyl phthalate | ND | 60 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Dimethyl phthalate | ND | 60 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 2,4-Dimethylphenol | ND | 58 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 2,4-Dinitrophenol | ND | 160 | 200 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 2-Methylphenol | ND | 50 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 3+4-Methylphenol | ND | 51 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Phenol | ND | 180 | 200 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Pyridine | ND | 140 | 400 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | | µg/L | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: 2-Fluorophenol | 60.1 | 0 | 29.4-87.7 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: Phenol-d5 | 43.5 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 66.4 | 0 | 18.6-129 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: Nitrobenzene-d5 | 75.3 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 71.5 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 3:06:10 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | | Analyst: DAM |
| 1,4-Dioxane | ND | 1.1 | 10 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Naphthalene | ND | 2.0 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Acenaphthene | ND | 1.4 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Fluorene | ND | 0.95 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Phenanthrene | ND | 1.6 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Anthracene | ND | 1.4 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Fluoranthene | ND | 1.4 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Pyrene | ND | 3.2 | 10 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Chrysene | ND | 2.5 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | | µg/L | 1 | 7/7/2022 4:39:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** MKTF-44**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022 8:30:00 AM**Lab ID:** 2206G22-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.2 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 71.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 4:39:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 96.7 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 4:39:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:30:00 AM

Lab ID: 2206G22-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.30 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Chromium | 0.019 | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Cobalt | 0.0081 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Nickel | 0.0081 | 0.0053 | 0.010 | J | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Vanadium | 0.21 | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| Zinc | 0.099 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:36:29 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:16:22 PM | 68545 |
| Arsenic | 0.019 | 0.00013 | 0.0010 | * | mg/L | 1 | 7/7/2022 2:16:22 PM | 68545 |
| Lead | 0.021 | 0.000061 | 0.00050 | * | mg/L | 1 | 7/7/2022 2:16:22 PM | 68545 |
| Selenium | 0.015 | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:16:22 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:56:39 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:30:00 AM

Lab ID: 2206G22-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.035 | 0.0011 | 0.0020 | | mg/L | 1 | 7/12/2022 10:25:47 AM | C89417 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Chromium | 0.0024 | 0.0020 | 0.0060 | J | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Vanadium | 0.12 | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 7/5/2022 2:05:58 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:47:34 PM | A89215 |
| Arsenic | 0.012 | 0.00012 | 0.0010 | * | mg/L | 1 | 7/1/2022 4:47:34 PM | A89215 |
| Lead | 0.00032 | 0.000057 | 0.00050 | J | mg/L | 1 | 7/1/2022 4:47:34 PM | A89215 |
| Selenium | 0.012 | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:47:34 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 12:58:47 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:50:00 AM

Lab ID: 2206G22-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 34 | 0.45 | 2.5 | | mg/L | 50 | 7/6/2022 1:45:38 PM | G89271 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 50 | 7/6/2022 1:45:38 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 12000 | 110 | 500 | | µg/L | 500 | 7/8/2022 2:19:00 AM | R89230 |
| Toluene | 28 | 10 | 50 | J | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Ethylbenzene | 510 | 11 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | 31 | 20 | 50 | J | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Isopropylbenzene | 14 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| n-Propylbenzene | 34 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Xylenes, Total | 100 | 19 | 75 | | µg/L | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Surr: Dibromofluoromethane | 99.4 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 2:42:00 AM | R89230 |
| Surr: Toluene-d8 | 97.5 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 2:42:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:50:00 AM

Lab ID: 2206G22-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/6/2022 8:23:37 PM | 68565 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:50:00 AM

Lab ID: 2206G22-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 4.7 | 0.16 | 0.64 | | mg/L | 10 | 7/12/2022 4:06:14 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 7/12/2022 4:06:14 PM | 68495 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 7/12/2022 4:06:14 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 1-Methylnaphthalene | 96 | 4.3 | 5.0 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 2-Methylnaphthalene | 71 | 4.2 | 5.0 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Naphthalene | 130 | 3.2 | 5.0 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Phenol | 110 | 18 | 20 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: 2-Fluorophenol | 55.1 | 0 | 29.4-87.7 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: Phenol-d5 | 41.2 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 70.3 | 0 | 18.6-129 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: Nitrobenzene-d5 | 74.3 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 66.6 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 82.9 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 3:48:28 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Acenaphthene | 3.0 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Fluorene | 5.3 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Phenanthrene | 7.3 | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 5:22:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-57**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022 8:50:00 AM**Lab ID:** 2206G22-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 74.3 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 53.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 5:22:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 76.6 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 5:22:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:50:00 AM

Lab ID: 2206G22-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|-----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 31 | 0.16 | 0.30 | * | mg/L | 100 | 7/15/2022 7:10:42 PM | 68545 |
| Beryllium | 0.029 | 0.018 | 0.040 | *J | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Cadmium | ND | 0.035 | 0.040 | | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Chromium | 0.25 | 0.039 | 0.12 | * | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Cobalt | 0.17 | 0.071 | 0.12 | | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Nickel | 0.31 | 0.11 | 0.20 | * | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Silver | ND | 0.037 | 0.10 | | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Vanadium | 0.43 | 0.071 | 1.0 | J | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| Zinc | 0.59 | 0.077 | 0.20 | | mg/L | 20 | 7/11/2022 11:43:11 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 7/7/2022 2:18:49 PM | 68545 |
| Arsenic | 0.047 | 0.00063 | 0.0050 | * | mg/L | 5 | 7/7/2022 2:18:49 PM | 68545 |
| Lead | 0.32 | 0.0012 | 0.010 | * | mg/L | 20 | 7/11/2022 12:35:12 PM | 68545 |
| Selenium | 0.078 | 0.0019 | 0.0050 | * | mg/L | 5 | 7/7/2022 2:18:49 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00025 | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:00:55 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 8:50:00 AM

Lab ID: 2206G22-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 3.5 | 0.0056 | 0.010 | * | mg/L | 5 | 7/14/2022 3:01:11 PM | B89506 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Cobalt | 0.0026 | 0.0024 | 0.0060 | J | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Nickel | 0.057 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Vanadium | 0.0029 | 0.0017 | 0.050 | J | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| Zinc | 0.0078 | 0.0032 | 0.010 | J | mg/L | 1 | 7/5/2022 2:09:13 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:50:16 PM | A89215 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:50:16 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:50:16 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:50:16 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:03:04 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:15:00 AM

Lab ID: 2206G22-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 74 | 0.45 | 2.5 | | mg/L | 50 | 7/6/2022 2:09:22 PM | G89271 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 50 | 7/6/2022 2:09:22 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 28000 | 110 | 500 | | µg/L | 500 | 7/8/2022 3:28:00 AM | R89230 |
| Toluene | 39 | 10 | 50 | J | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Ethylbenzene | 1200 | 11 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | 1000 | 20 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | 9.6 | 6.1 | 50 | J | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Isopropylbenzene | 31 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| n-Butylbenzene | 15 | 13 | 150 | J | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| n-Propylbenzene | 95 | 9.1 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| sec-Butylbenzene | 7.3 | 7.2 | 50 | J | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Xylenes, Total | 130 | 19 | 75 | | µg/L | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Surr: Dibromofluoromethane | 99.2 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 3:51:00 AM | R89230 |
| Surr: Toluene-d8 | 97.2 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 3:51:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:15:00 AM

Lab ID: 2206G22-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 11:12:27 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:15:00 AM

Lab ID: 2206G22-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | Analyst: SB |
| Diesel Range Organics (DRO) | 5.9 | 0.16 | 0.64 | | mg/L | 10 | 7/12/2022 4:30:07 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 7/12/2022 4:30:07 PM | 68495 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 7/12/2022 4:30:07 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | Analyst: JME |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 1-Methylnaphthalene | 68 | 4.3 | 5.0 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 2-Methylnaphthalene | 77 | 4.2 | 5.0 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Naphthalene | 140 | 3.2 | 5.0 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Phenol | 70 | 18 | 20 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: 2-Fluorophenol | 48.0 | 0 | 29.4-87.7 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: Phenol-d5 | 44.3 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 66.6 | 0 | 18.6-129 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: Nitrobenzene-d5 | 68.6 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 59.5 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 78.7 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 4:31:08 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | | Analyst: DAM |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Acenaphthene | 2.7 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Fluorene | 3.7 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Phenanthrene | 3.3 | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Anthracene | 0.40 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Fluoranthene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 6:07:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-58**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022 9:15:00 AM**Lab ID:** 2206G22-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 72.9 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 54.0 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 6:07:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 71.8 | 0 | 72.3-147 | S | %Rec | 1 | 7/7/2022 6:07:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:15:00 AM

Lab ID: 2206G22-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.5 | 0.016 | 0.030 | * | mg/L | 10 | 7/11/2022 11:45:55 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Nickel | 0.058 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Vanadium | 0.0049 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:44:32 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:21:15 PM | 68545 |
| Arsenic | 0.0039 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:21:15 PM | 68545 |
| Lead | 0.00039 | 0.000061 | 0.00050 | J | mg/L | 1 | 7/7/2022 2:21:15 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:21:15 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:05:12 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:15:00 AM

Lab ID: 2206G22-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 5.1 | 0.011 | 0.020 | * | mg/L | 10 | 7/8/2022 9:25:57 AM | A89335 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Nickel | 0.050 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 7/5/2022 2:18:11 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:52:57 PM | A89215 |
| Arsenic | 0.0035 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:52:57 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:52:57 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:52:57 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:07:21 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Qtr
Lab ID: 2206G22-005A

Client Sample ID: OW-58A
Collection Date: 6/29/2022 9:45:00 AM
Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 27 | 0.18 | 1.0 | | mg/L | 20 | 7/6/2022 2:33:03 PM | G89271 |
| Surr: BFB | 114 | 0 | 70-130 | | %Rec | 20 | 7/6/2022 2:33:03 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 6500 | 110 | 500 | | µg/L | 500 | 7/8/2022 4:37:00 AM | R89230 |
| Toluene | 130 | 10 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Ethylbenzene | 540 | 11 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | 2300 | 20 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | 260 | 6.1 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | 45 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Isopropylbenzene | 32 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| n-Butylbenzene | 15 | 13 | 150 | J | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| n-Propylbenzene | 76 | 9.1 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| sec-Butylbenzene | 7.9 | 7.2 | 50 | J | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Xylenes, Total | 620 | 19 | 75 | | µg/L | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Surr: Dibromofluoromethane | 97.9 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 5:00:00 AM | R89230 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 5:00:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:45:00 AM

Lab ID: 2206G22-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 11:43:07 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:45:00 AM

Lab ID: 2206G22-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 3.2 | 0.016 | 0.064 | | mg/L | 1 | 7/11/2022 6:20:38 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/11/2022 6:20:38 PM | 68495 |
| Surr: DNOP | 99.8 | 0 | 42.2-138 | | %Rec | 1 | 7/11/2022 6:20:38 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 2,4-Dimethylphenol | 11 | 5.8 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 1-Methylnaphthalene | 100 | 4.3 | 5.0 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 2-Methylnaphthalene | 97 | 4.2 | 5.0 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 2-Methylphenol | 9.5 | 5.0 | 10 | J | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Naphthalene | 190 | 3.2 | 5.0 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Phenol | 21 | 18 | 20 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: 2-Fluorophenol | 61.4 | 0 | 29.4-87.7 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: Phenol-d5 | 49.4 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 75.0 | 0 | 18.6-129 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: Nitrobenzene-d5 | 71.8 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 69.1 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 85.6 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 5:13:36 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Acenaphthene | 4.2 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Fluorene | 5.9 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Phenanthrene | 5.0 | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Anthracene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Fluoranthene | 0.26 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 6:51:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-58A**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022 9:45:00 AM**Lab ID:** 2206G22-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 79.8 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 61.4 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 6:51:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 79.5 | 0 | 72.3-147 | | %Rec | 1 | 7/7/2022 6:51:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:45:00 AM

Lab ID: 2206G22-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 1.2 | 0.0079 | 0.015 | | mg/L | 5 | 7/11/2022 11:53:18 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Chromium | 0.0035 | 0.0020 | 0.0060 | J | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Cobalt | 0.0065 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Nickel | 0.040 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| Zinc | 0.028 | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:47:18 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:23:42 PM | 68545 |
| Arsenic | 0.0045 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:23:42 PM | 68545 |
| Lead | 0.0051 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:23:42 PM | 68545 |
| Selenium | 0.00053 | 0.00037 | 0.0010 | J | mg/L | 1 | 7/7/2022 2:23:42 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 7/8/2022 1:26:39 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:45:00 AM

Lab ID: 2206G22-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 1.0 | 0.0056 | 0.010 | | mg/L | 5 | 7/12/2022 5:37:48 PM | C89417 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Nickel | 0.036 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| Zinc | 0.015 | 0.0032 | 0.010 | | mg/L | 1 | 7/5/2022 2:20:55 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:55:38 PM | A89215 |
| Arsenic | 0.0038 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:55:38 PM | A89215 |
| Lead | 0.00087 | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:55:38 PM | A89215 |
| Selenium | 0.00041 | 0.00034 | 0.0010 | J | mg/L | 1 | 7/1/2022 4:55:38 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:20:11 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022

Lab ID: 2206G22-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 77 | 0.45 | 2.5 | | mg/L | 50 | 7/6/2022 2:56:48 PM | G89271 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 50 | 7/6/2022 2:56:48 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 27000 | 110 | 500 | | µg/L | 500 | 7/8/2022 5:45:00 AM | R89230 |
| Toluene | 40 | 10 | 50 | J | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Ethylbenzene | 1200 | 11 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | 1000 | 20 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | 9.6 | 6.1 | 50 | J | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Isopropylbenzene | 30 | 9.1 | 50 | J | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| n-Butylbenzene | 14 | 13 | 150 | J | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| n-Propylbenzene | 93 | 9.1 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Xylenes, Total | 140 | 19 | 75 | | µg/L | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 6:08:00 AM | R89230 |
| Surr: Toluene-d8 | 98.2 | 0 | 70-130 | | %Rec | 50 | 7/8/2022 6:08:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022

Lab ID: 2206G22-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/6/2022 11:58:25 PM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022

Lab ID: 2206G22-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | | Analyst: SB |
| Diesel Range Organics (DRO) | 5.2 | 0.16 | 0.64 | | mg/L | 10 | 7/12/2022 4:54:04 PM | 68495 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 7/12/2022 4:54:04 PM | 68495 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 7/12/2022 4:54:04 PM | 68495 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | | Analyst: JME |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 1-Methylnaphthalene | 65 | 4.3 | 5.0 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 2-Methylnaphthalene | 73 | 4.2 | 5.0 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Naphthalene | 130 | 3.2 | 5.0 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Phenol | 44 | 18 | 20 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: 2-Fluorophenol | 10.4 | 0 | 29.4-87.7 | S | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: Phenol-d5 | 29.3 | 0 | 28.5-64.7 | | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: 2,4,6-Tribromophenol | 4.47 | 0 | 18.6-129 | S | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: Nitrobenzene-d5 | 63.1 | 0 | 36.9-103 | | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: 2-Fluorobiphenyl | 58.5 | 0 | 38.1-99.9 | | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| Surr: 4-Terphenyl-d14 | 75.8 | 0 | 48-155 | | %Rec | 1 | 7/12/2022 5:57:33 PM | 68493 |
| EPA METHOD 8270SIM | | | | | | | | Analyst: DAM |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Acenaphthene | 2.2 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Fluorene | 2.9 | 0.095 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Phenanthrene | 2.5 | 0.16 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Anthracene | 0.30 | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Fluoranthene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/7/2022 7:35:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206G22**Date Reported: **7/27/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** DUP-6-29-22**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/29/2022**Lab ID:** 2206G22-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.3 | 0 | 31.6-100 | | %Rec | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Surr: 2-Fluorobiphenyl | 45.7 | 0 | 26.7-90.1 | | %Rec | 1 | 7/7/2022 7:35:00 AM | 68493 |
| Surr: 4-Terphenyl-d14 | 67.6 | 0 | 72.3-147 | S | %Rec | 1 | 7/7/2022 7:35:00 AM | 68493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022

Lab ID: 2206G22-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 5.6 | 0.016 | 0.030 | * | mg/L | 10 | 7/11/2022 11:56:06 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Cobalt | 0.0039 | 0.0035 | 0.0060 | J | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Nickel | 0.055 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Vanadium | 0.0040 | 0.0035 | 0.050 | J | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| Zinc | 0.0060 | 0.0039 | 0.010 | J | mg/L | 1 | 7/11/2022 11:54:43 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:31:02 PM | 68545 |
| Arsenic | 0.0039 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:31:02 PM | 68545 |
| Lead | 0.00024 | 0.000061 | 0.00050 | J | mg/L | 1 | 7/7/2022 2:31:02 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:31:02 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:22:20 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022

Lab ID: 2206G22-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 5.0 | 0.011 | 0.020 | * | mg/L | 10 | 7/8/2022 9:16:51 AM | A89335 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Nickel | 0.051 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Vanadium | 0.0033 | 0.0017 | 0.050 | J | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 7/5/2022 2:23:43 PM | A89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 4:58:19 PM | A89215 |
| Arsenic | 0.0034 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 4:58:19 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 4:58:19 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 4:58:19 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/8/2022 1:24:30 PM | 68622 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-29-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/29/2022 9:45:00 AM

Lab ID: 2206G22-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 6:54:00 AM | R89230 |
| Surr: Toluene-d8 | 95.9 | 0 | 70-130 | | %Rec | 1 | 7/8/2022 6:54:00 AM | R89230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206G22-008A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|-----|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Acetone | 13 | 2.5 | 10 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Qtr
Lab ID: 2206G22-008A

Client Sample ID: Trip Blank
Collection Date:
Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 98.7 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 10:46:00 AM | R89347 |
| Surr: Toluene-d8 | 95.3 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 10:46:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206G22

Date Reported: 7/27/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206G22-008B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/7/2022 12:13:47 AM | 68566 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



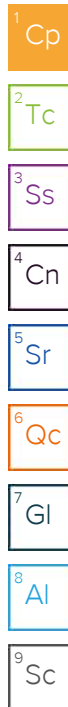
ANALYTICAL REPORT

July 15, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1511782
Samples Received: 07/06/2022
Project Number:
Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2206G22-001F EB-6-29-22 L1511782-01 | 5 | |
| 2206G22-002F MKTF-44 L1511782-02 | 6 | ⁴ Cn |
| 2206G22-003F OW-57 L1511782-03 | 7 | ⁵ Sr |
| 2206G22-004F OW-58 L1511782-04 | 8 | |
| 2206G22-005F OW-58A L1511782-05 | 9 | ⁶ Qc |
| 2206G22-006F DUP-6-29-22 L1511782-06 | 10 | |
| Qc: Quality Control Summary | 11 | ⁷ Gl |
| Wet Chemistry by Method 4500CN E-2016 | 11 | ⁸ Al |
| Gl: Glossary of Terms | 13 | |
| Al: Accreditations & Locations | 14 | ⁹ Sc |
| Sc: Sample Chain of Custody | 15 | |

2206G22-001F EB-6-29-22 L1511782-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889913 | 1 | 07/06/22 20:55 | 07/07/22 22:02 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/29/22 08:00
07/06/22 09:15

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206G22-002F MKTF-44 L1511782-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1889913 | 1 | 07/06/22 20:55 | 07/07/22 22:05 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/29/22 08:30
07/06/22 09:15

2206G22-003F OW-57 L1511782-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:48 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/29/22 08:50
07/06/22 09:15

2206G22-004F OW-58 L1511782-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:54 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/29/22 09:15
07/06/22 09:15

2206G22-005F OW-58A L1511782-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:55 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/29/22 09:45
07/06/22 09:15

2206G22-006F DUP-6-29-22 L1511782-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:56 | LDT | Mt. Juliet, TN |

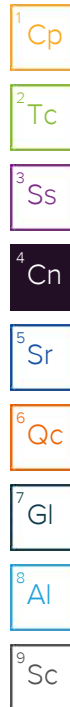
Collected by
Collected date/time
Received date/time

06/29/22 00:00
07/06/22 09:15

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/07/2022 22:02 | WG1889913 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Collected date/time: 06/29/22 08:30

L1511782

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/07/2022 22:05 | WG1889913 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J6 P1 | 0.00500 | 1 | 07/13/2022 10:48 | WG1893803 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/13/2022 10:54 | WG1893803 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00519 | | 0.00500 | 1 | 07/13/2022 10:55 | WG1893803 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/13/2022 10:56 | WG1893803 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1511782-01,02

Method Blank (MB)

(MB) R3812243-1 07/07/22 21:28

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1511095-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1511095-04 07/07/22 21:43 • (DUP) R3812243-6 07/07/22 21:44

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3812243-2 07/07/22 21:29

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0940 | 94.0 | 87.1-120 | |

L1510887-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1510887-03 07/07/22 21:36 • (MS) R3812243-4 07/07/22 21:37 • (MSD) R3812243-5 07/07/22 21:38

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0974 | 0.0954 | 97.4 | 95.4 | 1 | 90.0-110 | | | 2.07 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1511782-03,04,05,06

Method Blank (MB)

(MB) R3814178-1 07/13/22 10:39

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1511782-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1511782-03 07/13/22 10:48 • (DUP) R3814178-3 07/13/22 10:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 53.3 | P1 | 20 |

L1511925-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1511925-02 07/13/22 10:58 • (DUP) R3814178-6 07/13/22 10:59

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.00605 | ND | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3814178-2 07/13/22 10:40

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0936 | 93.6 | 87.1-120 | |

L1511782-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511782-03 07/13/22 10:48 • (MS) R3814178-4 07/13/22 10:52 • (MSD) R3814178-5 07/13/22 10:53

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0948 | 0.0919 | 92.8 | 89.9 | 1 | 90.0-110 | | J6 | 3.11 | 20 |

L1511925-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511925-02 07/13/22 10:58 • (MS) R3814178-7 07/13/22 11:00 • (MSD) R3814178-8 07/13/22 11:03

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00605 | 0.0971 | 0.0935 | 91.1 | 87.5 | 1 | 90.0-110 | | J6 | 3.78 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

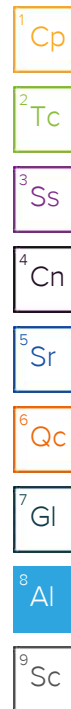
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

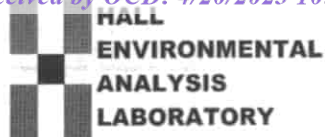
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 2029 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

E153

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|-----------------------------|
| 1 | 2206G22-001F | EB-6-29-22 | 500AMBHDP | Groundw | 6/29/2022 8:00:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2206G22-002F | MKTF-44 | 500AMBHDP | Groundw | 6/29/2022 8:30:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2206G22-003F | OW-57 | 500AMBHDP | Groundw | 6/29/2022 8:50:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2206G22-004F | OW-58 | 500AMBHDP | Groundw | 6/29/2022 9:15:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2206G22-005F | OW-58A | 500AMBHDP | Groundw | 6/29/2022 9:45:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2206G22-006F | DUP-6-29-22 | 500AMBHDP | Groundw | 6/29/2022 | 1 | Total Cyanide J and MDL -06 |

Sample Receipt Checklist

 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|----------------|---------------|-----------------------------------|--------------|------------|--|
| Relinquished By: <i>CWC</i> | Date: 7/1/2022 | Time: 7:26 AM | Received By: <i>Sarah S. Shub</i> | Date: 7/1/22 | Time: 9:15 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples <i>DRM 470-4</i> °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68545 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176277 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68545 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176278 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0030 | 0.002000 | 0 | 108 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.2 | 50 | 150 | | | J |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 97.2 | 50 | 150 | | | J |
| Cobalt | 0.0055 | 0.0060 | 0.006000 | 0 | 91.2 | 50 | 150 | | | J |
| Nickel | 0.0066 | 0.010 | 0.005000 | 0 | 132 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 93.9 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 119 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68545 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176279 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.4 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 90.8 | 85 | 115 | | | |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C89417 | RunNo: 89417 | | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | SeqNo: 3181584 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |

| | | | | | | | | | | |
|----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LL LCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C89417 | RunNo: 89417 | | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | SeqNo: 3181585 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0012 | 0.0030 | 0.002000 | 0 | 60.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C89417 | RunNo: 89417 | | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | SeqNo: 3181586 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 100 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-001DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: EB-6-29-22 | Batch ID: 68545 | RunNo: 89420 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/11/2022 | SeqNo: 3183471 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.55 | 0.0030 | 0.5000 | 0 | 110 | 70 | 130 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 70 | 130 | | | |
| Chromium | 0.55 | 0.0060 | 0.5000 | 0 | 109 | 70 | 130 | | | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Nickel | 0.52 | 0.010 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Zinc | 0.54 | 0.010 | 0.5000 | 0 | 107 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-001DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: EB-6-29-22 | Batch ID: 68545 | RunNo: 89420 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/11/2022 | SeqNo: 3183475 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 107 | 70 | 130 | 3.00 | 20 | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | 1.40 | 20 | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 107 | 70 | 130 | 2.66 | 20 | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 70 | 130 | 2.38 | 20 | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 101 | 70 | 130 | 3.44 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|--------|----------|------|
| Sample ID: 2206G22-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-6-29-22 | | Batch ID: 68545 | | RunNo: 89420 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/11/2022 | | SeqNo: 3183475 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 70 | 130 | 2.03 | 20 | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | 0.0403 | 20 | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 70 | 130 | 4.43 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2206G22-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-44 | | Batch ID: 68545 | | RunNo: 89420 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/11/2022 | | SeqNo: 3183477 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.77 | 0.0030 | 0.5000 | 0.2950 | 94.0 | 70 | 130 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 70 | 130 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.9 | 70 | 130 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0.01938 | 97.6 | 70 | 130 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0.008123 | 94.9 | 70 | 130 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0.008079 | 91.3 | 70 | 130 | | | |
| Silver | 0.092 | 0.0050 | 0.1000 | 0 | 92.2 | 70 | 130 | | | |
| Vanadium | 0.69 | 0.050 | 0.5000 | 0.2122 | 96.1 | 70 | 130 | | | |
| Zinc | 0.58 | 0.010 | 0.5000 | 0.09858 | 95.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|--------|----------|------|
| Sample ID: 2206G22-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-44 | | Batch ID: 68545 | | RunNo: 89420 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/11/2022 | | SeqNo: 3183478 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.75 | 0.0030 | 0.5000 | 0.2950 | 91.7 | 70 | 130 | 1.52 | 20 | |
| Beryllium | 0.48 | 0.0020 | 0.5000 | 0 | 96.0 | 70 | 130 | 3.00 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.4 | 70 | 130 | 0.472 | 20 | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0.01938 | 98.1 | 70 | 130 | 0.424 | 20 | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0.008123 | 94.4 | 70 | 130 | 0.481 | 20 | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0.008079 | 90.6 | 70 | 130 | 0.733 | 20 | |
| Silver | 0.092 | 0.0050 | 0.1000 | 0 | 92.2 | 70 | 130 | 0.0202 | 20 | |
| Vanadium | 0.68 | 0.050 | 0.5000 | 0.2122 | 92.9 | 70 | 130 | 2.29 | 20 | |
| Zinc | 0.58 | 0.010 | 0.5000 | 0.09858 | 95.9 | 70 | 130 | 0.0337 | 20 | |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-B | | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: PBW | | Batch ID: B89506 | | RunNo: 89506 | | | | | | |
| Prep Date: | | Analysis Date: 7/14/2022 | | SeqNo: 3185688 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LLLCS-B | SampType: LCSLL | | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: B89506 | | | RunNo: 89506 | | | | | | |
| Prep Date: | Analysis Date: 7/14/2022 | | | SeqNo: 3185689 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0030 | 0.002000 | 0 | 71.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: LCSW | Batch ID: B89506 | | | RunNo: 89506 | | | | | | |
| Prep Date: | Analysis Date: 7/14/2022 | | | SeqNo: 3185690 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175457 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175458 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 100 | 50 | 150 | | | |
| Chromium | 0.0051 | 0.0060 | 0.006000 | 0 | 85.8 | 50 | 150 | | | J |
| Cobalt | 0.0064 | 0.0060 | 0.006000 | 0 | 107 | 50 | 150 | | | |
| Nickel | 0.0031 | 0.010 | 0.005000 | 0 | 61.8 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 104 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175459 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A89335 | | RunNo: 89335 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3177557 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LL LCS-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A89335 | | RunNo: 89335 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3177558 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0020 | 0.002000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A89335 | | RunNo: 89335 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3177559 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-005EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: OW-58A | Batch ID: C89417 | | RunNo: 89417 | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | | SeqNo: 3181792 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 3.6 | 0.010 | 2.500 | 1.000 | 106 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-005EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: OW-58A | Batch ID: C89417 | | RunNo: 89417 | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | | SeqNo: 3181793 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 3.6 | 0.010 | 2.500 | 1.000 | 104 | 70 | 130 | 1.44 | 20 | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: C89417 | | RunNo: 89417 | | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | | SeqNo: 3181994 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LLLCS-C | SampType: LCSLL | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: BatchQC | Batch ID: C89417 | | | RunNo: 89417 | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | | | SeqNo: 3181995 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0012 | 0.0020 | 0.002000 | 0 | 60.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: LCSW | Batch ID: C89417 | | | RunNo: 89417 | | | | | | |
| Prep Date: | Analysis Date: 7/12/2022 | | | SeqNo: 3181996 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------|--------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68545 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175614 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|--------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-68545 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175615 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.1 | 50 | 150 | | | J |
| Selenium | 0.00096 | 0.0010 | 0.001000 | 0 | 96.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68545 | | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3175616 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.5 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.6 | 85 | 115 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 89.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A89215 | | RunNo: 89215 | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | SeqNo: 3171349 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A89215 | | RunNo: 89215 | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | SeqNo: 3171350 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.00099 | 0.0010 | 0.001000 | 0 | 98.9 | 50 | 150 | | | J |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A89215 | | RunNo: 89215 | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | | SeqNo: 3171351 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.4 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68622 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 68622 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177690 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68622 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68622 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177691 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00012 | 0.00020 | 0.0001500 | 0 | 78.0 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68622 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 68622 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177692 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0050 | 0.00020 | 0.005000 | 0 | 100 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-005DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-58A | Batch ID: 68622 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177751 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0043 | 0.0010 | 0.005000 | 0 | 85.8 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|--------|----------|------|
| Sample ID: 2206G22-005DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-58A | Batch ID: 68622 | RunNo: 89336 | | | | | | | | |
| Prep Date: 7/7/2022 | Analysis Date: 7/8/2022 | SeqNo: 3177752 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0043 | 0.0010 | 0.005000 | 0 | 85.8 | 75 | 125 | 0.0543 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68565 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 68565 | | RunNo: 89272 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174554 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68565 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 68565 | | RunNo: 89272 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174555 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68566 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68566 | | RunNo: 89272 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174557 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.076 | 0.010 | 0.1000 | 0 | 76.3 | 70 | 130 | 10.9 | 20 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | RunNo: 89289 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3175380 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68566 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 68566 | | RunNo: 89289 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3175381 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 99.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | RunNo: 89289 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3175387 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | | |
|----------------------------|--|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68565 | | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | | Batch ID: 68565 | | RunNo: 89272 | | | | | | | |
| Prep Date: 7/6/2022 | | Analysis Date: 7/6/2022 | | SeqNo: 3175397 | | Units: µg/L | | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68495 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68495 | | RunNo: 89367 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | | SeqNo: 3179031 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.023 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 101 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68495 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68495 | | RunNo: 89367 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | | SeqNo: 3180276 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 | 0.1875 | 0 | 75.5 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68495 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68495 | | RunNo: 89367 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/11/2022 | | SeqNo: 3180277 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 78.6 | 31.7 | 75.4 | 3.96 | 20 | S |
| Surr: DNOP | 0.019 | | 0.01875 | | 103 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174470 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174471 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.52 | 0.050 | 0.5000 | 0 | 103 | 80 | 120 | | | |
| Surr: BFB | 40 | | 20.00 | | 202 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206g22-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-44 | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174474 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 108 | 70 | 130 | | | |
| Surr: BFB | 43 | | 20.00 | | 216 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2206g22-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-44 | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174475 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 107 | 70 | 130 | 0.335 | 20 | |
| Surr: BFB | 43 | | 20.00 | | 215 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: 100ng lcs 2 | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R89230 | | | RunNo: 89230 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3176866 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.1 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.7 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 85.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 92.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.3 | 70 | 130 | | | |

| Sample ID: mb 2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89230 | | | RunNo: 89230 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3176867 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89230 | | RunNo: 89230 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3176867 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-002AMS | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-44 | Batch ID: R89230 | | RunNo: 89230 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3176870 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.9 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 99.9 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.7 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 96.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206G22-002AMSD | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MKTF-44 | Batch ID: R89230 | | RunNo: 89230 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3176871 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 97.8 | 70 | 130 | 2.14 | 20 | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.7 | 70 | 130 | 3.25 | 20 | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | 1.54 | 20 | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.0 | 70 | 130 | 5.28 | 20 | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.1 | 70 | 130 | 3.35 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178063 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.8 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 99.0 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.3 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs 2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178064 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.2 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 87.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178065 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | | RunNo: 89347 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3178065 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178065 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |

| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178066 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb 2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | | RunNo: 89347 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3178066 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178066 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 96.5 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB-68493 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179690 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 43 | | 200.0 | | 21.7 | 29.4 | 87.7 | | | S |
| Surr: Phenol-d5 | 33 | | 200.0 | | 16.7 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 64 | | 200.0 | | 32.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 26 | | 100.0 | | 26.2 | 36.9 | 103 | | | S |
| Surr: 2-Fluorobiphenyl | 28 | | 100.0 | | 27.6 | 38.1 | 99.9 | | | S |
| Surr: 4-Terphenyl-d14 | 52 | | 100.0 | | 51.7 | 48 | 155 | | | |

| Sample ID: LCS-68493 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179691 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68493 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179691 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 63.3 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 55 | 5.0 | 100.0 | 0 | 54.5 | 15 | 89.8 | | | |
| Phenol | 83 | 20 | 200.0 | 0 | 41.5 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 75.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 51.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.7 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.8 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.8 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.6 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68493 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68493 | | RunNo: 89329 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/8/2022 | | SeqNo: 3179692 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 37 | 10 | 100.0 | 0 | 36.8 | 21.3 | 104 | 53.0 | 45.3 | R |
| 1,4-Dichlorobenzene | 33 | 5.0 | 100.0 | 0 | 32.9 | 15 | 89.8 | 49.3 | 39.6 | R |
| Phenol | 47 | 20 | 200.0 | 0 | 23.4 | 17 | 61.1 | 55.7 | 42.5 | R |
| Pyrene | 55 | 10 | 100.0 | 0 | 55.4 | 61 | 123 | 30.2 | 11.8 | RS |
| Surr: 2-Fluorophenol | 60 | | 200.0 | | 29.9 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 44 | | 200.0 | | 21.9 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.2 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 39 | | 100.0 | | 39.3 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 36 | | 100.0 | | 36.5 | 38.1 | 99.9 | 0 | 0 | S |
| Surr: 4-Terphenyl-d14 | 60 | | 100.0 | | 60.0 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68493 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68493 | | RunNo: 89386 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3179969 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB-68493 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68493 | | RunNo: 89386 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3179969 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 41 | | 200.0 | | 20.7 | 29.4 | 87.7 | | | S |
| Surr: Phenol-d5 | 33 | | 200.0 | | 16.3 | 28.5 | 64.7 | | | S |
| Surr: 2,4,6-Tribromophenol | 65 | | 200.0 | | 32.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 28 | | 100.0 | | 28.0 | 36.9 | 103 | | | S |
| Surr: 2-Fluorobiphenyl | 27 | | 100.0 | | 26.9 | 38.1 | 99.9 | | | S |
| Surr: 4-Terphenyl-d14 | 53 | | 100.0 | | 52.6 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68493 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 68493 | | RunNo: 89275 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/6/2022 | | SeqNo: 3174754 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 33 | | 100.0 | | 33.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 73 | | 200.0 | | 36.7 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 38 | | 100.0 | | 38.0 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 81 | | 100.0 | | 80.5 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68493 If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 68493 | | RunNo: 89275 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3174755 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.98 | 0.10 | 2.000 | 0 | 49.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 102 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 104 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 78.0 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206G22

27-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-68493 If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 68493 | | RunNo: 89275 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3174755 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 83 | | 100.0 | | 83.1 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-68493 If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68493 | | RunNo: 89275 | | | | | | | |
| Prep Date: 7/1/2022 | Analysis Date: 7/7/2022 | | SeqNo: 3174756 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.42 | 0.10 | 2.000 | 0 | 21.0 | 20.2 | 48.4 | 86.5 | 30.1 | R |
| Naphthalene | 0.60 | 0.30 | 2.000 | 0 | 30.0 | 21.3 | 79.9 | 87.9 | 25.6 | R |
| 1-Methylnaphthalene | 0.64 | 0.30 | 2.000 | 0 | 32.0 | 22.2 | 80.3 | 80.4 | 25 | R |
| 2-Methylnaphthalene | 0.66 | 0.30 | 2.000 | 0 | 33.0 | 20.6 | 80.1 | 76.6 | 25 | R |
| Acenaphthene | 0.70 | 0.30 | 2.000 | 0 | 35.0 | 29.8 | 82.7 | 80.3 | 27.8 | R |
| Fluorene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 33.3 | 86 | 56.5 | 26.4 | R |
| Phenanthrene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 38.2 | 93.9 | 33.3 | 27.9 | R |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 41.1 | 95.6 | 4.60 | 25.6 | |
| Fluoranthene | 2.2 | 0.30 | 2.000 | 0 | 108 | 52.9 | 123 | 8.70 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | 2.33 | 20 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 103 | 51 | 147 | 6.00 | 24.1 | |
| Chrysene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 55.3 | 115 | 34.7 | 20 | R |
| Benzo(b)fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 44.4 | 136 | 13.3 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 107 | 31.4 | 165 | 17.3 | 21.1 | |
| Surr: Nitrobenzene-d5 | 35 | | 100.0 | | 35.0 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 80 | | 200.0 | | 39.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 33.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 57 | | 100.0 | | 56.5 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2206G22

RcptNo: 1

Received By: Cheyenne Cason 6/30/2022 7:30:00 AM

Completed By: Cheyenne Cason 6/30/2022 8:08:37 AM

Reviewed By:

KAC 6.30.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ DAD 6.30.22 NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

12:6
(2 or 12 unless noted)

Adjusted? YES

Checked by: DAD 6/30/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

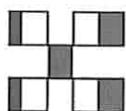
Regarding:

Client Instructions:

16. Additional remarks: For metals analysis added ~0.5mL HNO_3 to sample 005D

17. Cooler Information and ~1.0m HNO_3 to 003D For PH < 2... DAD 6/30/22

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.6 | Good | Not Present | | | |
| 2 | 1.3 | Good | Not Present | | | |
| 3 | 2.3 | Good | Not Present | | | |



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

| Client: | Marathon Gallup Refinery | | | | | | X Standard Rush |
|-------------------------|--|-------------------------|---------------------|----------------------|-------------------|-------------|------------------------|
| Mailing Address: | 92 Giant Crossing Road
Jamestown, NM,87347
Phone #: 808-640-1823
Email or Fax#:
JQC Package:
X Standard ☐ Level 4 (Full Validation) | | | | | | |
| Acreditation: | ☐ Az Compliance ☒ NELAC ☐ Other _____
EEDD (Type) _____ | | | | | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | |
| 6/29 | 8:00 | | EB-6-29-22 | 14 | | 2.3-0=2.3 | |
| 6/29 | 8:30 | | MKTE-44 | 14 | | 22066227 | |
| 6/29 | 8:50 | | DW-57 | 14 | | 001 | |
| 6/29 | 9:15 | | DW-58 | 14 | | 002 | |
| 6/29 | 9:45 | | DW-58A | 14 | | 003 | |
| 6/29 | - | | DWP-6-29-22 | 14 | | 004 | |
| 6/29 | 9:45 | | FB-6-29-22 | 3 | | 005 | |
| | | | Trip Blank | | | 006 | |
| | | | | | | 007 | |
| | | | | | | 008 | |
| Date | Time | Relinquished by: | Received by: | Via: | Date | Time | |
| 6/29 | 12:30 | Hilario Trejo | CNC Cavier | Glasser | 0730 | | |
| Date: | Time: | Relinquished by: | Received by: | Via: | Date | Time | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 15, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206528

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/9/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 12, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206528
Date: 8/15/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Analytical notes regarding EPA Method 8015D DRO/MRO:

The Laboratory control spike had elevated recovery that was due to laboratory error. The Laboratory control spike duplicate had acceptable recoveries.

Analytical Notes Regarding EPA Method 8270:

Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270SIMS, depending which method needs the least dilution. In this report Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMS for sample OW-63.

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/14/2022 7:44:00 PM | A88732 |
| Surr: BFB | 94.3 | 0 | 70-130 | | %Rec | 1 | 6/14/2022 7:44:00 PM | A88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Surr: 4-Bromofluorobenzene | 94.2 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 11:37:46 AM | R88822 |
| Surr: Toluene-d8 | 94.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 11:37:46 AM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | EB-6-8-22 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/8/2022 8:10:00 AM |
| Lab ID: | 2206528-001B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 1:02:48 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.044 | 0.016 | 0.064 | J | mg/L | 1 | 6/15/2022 12:18:16 PM | 68038 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/15/2022 12:18:16 PM | 68038 |
| Surr: DNOP | 107 | 0 | 42.2-138 | | %Rec | 1 | 6/15/2022 12:18:16 PM | 68038 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: 2-Fluorophenol | 61.0 | 0 | 29.4-87.7 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: Phenol-d5 | 45.1 | 0 | 28.5-64.7 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 66.9 | 0 | 18.6-129 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 36.9-103 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 68.3 | 0 | 38.1-99.9 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 87.5 | 0 | 48-155 | | %Rec | 1 | 6/22/2022 2:03:18 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.30 | 0.11 | 1.0 | J | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 4:16:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 78.1 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 72.1 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 4:16:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 112 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 4:16:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 4:47:56 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:10:49 AM | 68127 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:10:49 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:10:49 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:10:49 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:01:51 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| Zinc | 0.0068 | 0.0032 | 0.010 | J | mg/L | 1 | 6/12/2022 11:18:23 AM | B88662 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 11:40:31 AM | A88688 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/13/2022 11:40:31 AM | A88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/13/2022 11:40:31 AM | A88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 11:40:31 AM | A88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:08:15 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:10:00 AM

Lab ID: 2206528-001F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 6/22/2022 6:17:00 PM | R89412 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 26 | 0.45 | 2.5 | | mg/L | 50 | 6/14/2022 8:43:00 PM | A88732 |
| Surr: BFB | 105 | 0 | 70-130 | | %Rec | 50 | 6/14/2022 8:43:00 PM | A88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 8600 | 110 | 500 | | µg/L | 500 | 6/16/2022 12:06:33 PM | R88822 |
| Toluene | 46 | 10 | 50 | J | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Ethylbenzene | 1200 | 11 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 20 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Isopropylbenzene | 57 | 9.1 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| n-Propylbenzene | 150 | 9.1 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| sec-Butylbenzene | 8.3 | 7.2 | 50 | J | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Xylenes, Total | 120 | 19 | 75 | | µg/L | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 90.0 | 0 | 70-130 | | %Rec | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 93.6 | 0 | 70-130 | | %Rec | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Surr: Dibromofluoromethane | 107 | 0 | 70-130 | | %Rec | 50 | 6/16/2022 12:35:22 PM | R88822 |
| Surr: Toluene-d8 | 94.3 | 0 | 70-130 | | %Rec | 50 | 6/16/2022 12:35:22 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/14/2022 1:17:58 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|---------------------|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | Analyst: SB | | |
| Diesel Range Organics (DRO) | 3.5 | 0.016 | 0.064 | | mg/L | 1 | 6/15/2022 12:42:02 PM | 68038 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/15/2022 12:42:02 PM | 68038 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 1 | 6/15/2022 12:42:02 PM | 68038 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | Analyst: DAM | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 1-Methylnaphthalene | 56 | 4.3 | 5.0 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 2-Methylnaphthalene | 78 | 4.2 | 5.0 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Naphthalene | 190 | 3.2 | 5.0 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Phenol | 27 | 18 | 20 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: 2-Fluorophenol | 52.8 | 0 | 29.4-87.7 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: Phenol-d5 | 39.7 | 0 | 28.5-64.7 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 72.9 | 0 | 18.6-129 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: Nitrobenzene-d5 | 62.5 | 0 | 36.9-103 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 58.4 | 0 | 38.1-99.9 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 81.6 | 0 | 48-155 | | %Rec | 1 | 6/22/2022 2:44:46 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Acenaphthene | 0.70 | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Fluorene | 1.3 | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Phenanthrene | 0.84 | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 5:00:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.3 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 55.4 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 5:00:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 74.6 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 5:00:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 4.7 | 0.016 | 0.030 | * | mg/L | 10 | 6/16/2022 5:28:30 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Nickel | 0.029 | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 4:52:55 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:18:10 AM | 68127 |
| Arsenic | 0.0088 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:18:10 AM | 68127 |
| Lead | 0.000076 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 11:18:10 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:18:10 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:10:24 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:15:00 AM

Lab ID: 2206528-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 4.1 | 0.0056 | 0.010 | * | mg/L | 5 | 6/12/2022 11:23:05 AM | B88662 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Nickel | 0.028 | 0.0033 | 0.010 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Vanadium | 0.0027 | 0.0017 | 0.050 | J | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 6/12/2022 11:21:39 AM | B88662 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00061 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/13/2022 11:43:13 AM | A88688 |
| Arsenic | 0.0068 | 0.00012 | 0.0010 | | mg/L | 1 | 6/13/2022 11:43:13 AM | A88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/13/2022 11:43:13 AM | A88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 11:43:13 AM | A88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:12:33 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-63 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/8/2022 8:15:00 AM |
| Lab ID: | 2206528-002F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 11.2 | 1.80 | 5.00 | | ug/L | 1 | 6/22/2022 6:19:00 PM | R89412 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|--|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Estimated value |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | PQL Practical Quantitative Limit | RL Reporting Limit |
| | S % Recovery outside of range due to dilution or matrix interference | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.53 | 0.0090 | 0.050 | | mg/L | 1 | 6/14/2022 9:03:00 PM | A88732 |
| Surr: BFB | 288 | 0 | 70-130 | S | %Rec | 1 | 6/14/2022 9:03:00 PM | A88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 12 | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Ethylbenzene | 47 | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,2,4-Trimethylbenzene | 47 | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,3,5-Trimethylbenzene | 2.0 | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Isopropylbenzene | 16 | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 4-Isopropyltoluene | 1.0 | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| n-Propylbenzene | 6.2 | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| sec-Butylbenzene | 3.1 | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Xylenes, Total | 9.2 | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 94.3 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 89.5 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Surr: Dibromofluoromethane | 107 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 1:04:13 PM | R88822 |
| Surr: Toluene-d8 | 94.4 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 1:04:13 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 1:33:15 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.40 | 0.016 | 0.064 | | mg/L | 1 | 6/15/2022 1:05:52 PM | 68038 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/15/2022 1:05:52 PM | 68038 |
| Surr: DNOP | 125 | 0 | 42.2-138 | | %Rec | 1 | 6/15/2022 1:05:52 PM | 68038 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: 2-Fluorophenol | 48.3 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: Phenol-d5 | 37.4 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: 2,4,6-Tribromophenol | 70.1 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: Nitrobenzene-d5 | 65.8 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 69.4 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 83.6 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 9:42:40 AM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Naphthalene | 2.3 | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| 1-Methylnaphthalene | 1.4 | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| 2-Methylnaphthalene | 0.36 | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Acenaphthene | 0.16 | 0.14 | 0.30 | J | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Fluorene | 0.38 | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Phenanthrene | 0.76 | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Anthracene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Fluoranthene | 0.50 | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 5:43:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 72.6 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 61.5 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 5:43:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 76.9 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 5:43:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.29 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Chromium | 0.0033 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Vanadium | 0.0080 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| Zinc | 0.0057 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 4:54:21 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:20:37 AM | 68127 |
| Arsenic | 0.0026 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 5:56:29 PM | 68127 |
| Lead | 0.00077 | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:20:37 AM | 68127 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 5:56:29 PM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:14:42 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 8:50:00 AM

Lab ID: 2206528-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.23 | 0.0011 | 0.0020 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Vanadium | 0.0035 | 0.0017 | 0.050 | J | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| Zinc | 0.0054 | 0.0032 | 0.010 | J | mg/L | 1 | 6/12/2022 11:24:32 AM | B88662 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 11:45:54 AM | A88688 |
| Arsenic | 0.0020 | 0.00012 | 0.0010 | | mg/L | 1 | 6/13/2022 11:45:54 AM | A88688 |
| Lead | 0.000080 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/13/2022 11:45:54 AM | A88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 11:45:54 AM | A88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:16:51 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-64 |
| Project: | 2022 GW Sampling 2nd Quarter | Collection Date: | 6/8/2022 8:50:00 AM |
| Lab ID: | 2206528-003F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 6/22/2022 6:20:00 PM | R89412 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|--|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Estimated value |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | PQL Practical Quantitative Limit | RL Reporting Limit |
| | S % Recovery outside of range due to dilution or matrix interference | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.012 | 0.0090 | 0.050 | J | mg/L | 1 | 6/14/2022 9:23:00 PM | A88732 |
| Surr: BFB | 92.7 | 0 | 70-130 | | %Rec | 1 | 6/14/2022 9:23:00 PM | A88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 7.1 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,1-Dichloroethane | 1.0 | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Methylene Chloride | 47 | 5.0 | 30 | | µg/L | 10 | 6/21/2022 3:10:06 PM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 99.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 2:31:08 PM | R88822 |
| Surr: Toluene-d8 | 89.3 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 2:31:08 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 2:03:38 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.12 | 0.016 | 0.064 | | mg/L | 1 | 6/15/2022 1:29:46 PM | 68038 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/15/2022 1:29:46 PM | 68038 |
| Surr: DNOP | 97.2 | 0 | 42.2-138 | | %Rec | 1 | 6/15/2022 1:29:46 PM | 68038 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: 2-Fluorophenol | 60.0 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: Phenol-d5 | 45.1 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: 2,4,6-Tribromophenol | 70.3 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: Nitrobenzene-d5 | 73.0 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 73.5 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 87.8 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 10:24:07 AM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.3 | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 6:28:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 80.8 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 68.6 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 6:28:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 88.1 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 6:28:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.057 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Vanadium | 0.0061 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| Zinc | 0.0081 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 4:55:47 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:27:56 AM | 68127 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:27:56 AM | 68127 |
| Lead | 0.00021 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 11:27:56 AM | 68127 |
| Selenium | 0.013 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:27:56 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:19:01 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.046 | 0.0011 | 0.0020 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Cobalt | 0.0039 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Vanadium | 0.0055 | 0.0017 | 0.050 | J | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| Zinc | 0.0056 | 0.0032 | 0.010 | J | mg/L | 1 | 6/12/2022 11:27:58 AM | B88662 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 11:48:35 AM | A88688 |
| Arsenic | 0.00065 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 11:48:35 AM | A88688 |
| Lead | 0.000080 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/13/2022 11:48:35 AM | A88688 |
| Selenium | 0.010 | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 11:48:35 AM | A88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:21:12 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-004F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 6/22/2022 6:21:00 PM | R89412 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022 9:20:00 AM

Lab ID: 2206528-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 97.2 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 97.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Surr: Dibromofluoromethane | 122 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:00:12 PM | R88822 |
| Surr: Toluene-d8 | 91.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:00:12 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.012 | 0.0090 | 0.050 | J | mg/L | 1 | 6/14/2022 9:43:00 PM | A88732 |
| Surr: BFB | 94.1 | 0 | 70-130 | | %Rec | 1 | 6/14/2022 9:43:00 PM | A88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 7.3 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 96.9 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Surr: Dibromofluoromethane | 126 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:29:17 PM | R88822 |
| Surr: Toluene-d8 | 89.9 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:29:17 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 2:18:51 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.091 | 0.016 | 0.064 | | mg/L | 1 | 6/15/2022 1:53:30 PM | 68038 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/15/2022 1:53:30 PM | 68038 |
| Surr: DNOP | 97.0 | 0 | 42.2-138 | | %Rec | 1 | 6/15/2022 1:53:30 PM | 68038 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: 2-Fluorophenol | 54.8 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: Phenol-d5 | 41.2 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: 2,4,6-Tribromophenol | 66.8 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: Nitrobenzene-d5 | 68.1 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 68.6 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 83.7 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 11:05:41 AM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.1 | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Pyrene | 0.60 | 0.32 | 1.0 | J | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 7:14:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 79.2 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 68.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 7:14:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 90.3 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 7:14:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.055 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Vanadium | 0.0067 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| Zinc | 0.0071 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 4:57:29 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:30:23 AM | 68127 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:30:23 AM | 68127 |
| Lead | 0.00021 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 11:30:23 AM | 68127 |
| Selenium | 0.012 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:30:23 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:23:20 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.045 | 0.0011 | 0.0020 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Cobalt | 0.0028 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Vanadium | 0.0063 | 0.0017 | 0.050 | J | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| Zinc | 0.0066 | 0.0032 | 0.010 | J | mg/L | 1 | 6/12/2022 11:36:09 AM | B88662 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 11:51:17 AM | A88688 |
| Arsenic | 0.00067 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 11:51:17 AM | A88688 |
| Lead | 0.000074 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/13/2022 11:51:17 AM | A88688 |
| Selenium | 0.011 | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 11:51:17 AM | A88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:25:27 PM | 68088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-8-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/8/2022

Lab ID: 2206528-006F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 6/22/2022 6:24:00 PM | R89412 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206528-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Surr: Dibromofluoromethane | 124 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:58:25 PM | R88822 |
| Surr: Toluene-d8 | 88.5 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 3:58:25 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206528

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206528-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 2:34:06 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

June 23, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1504798

Samples Received: 06/14/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2206528-001F EB-6-8-22 L1504798-01 | 5 | |
| 2206528-002F OW-63 L1504798-02 | 6 | ⁴ Cn |
| 2206528-003F OW-64 L1504798-03 | 7 | ⁵ Sr |
| 2206528-004F OW-10 L1504798-04 | 8 | |
| 2206528-006F DUP-6-8-22 L1504798-05 | 9 | ⁶ Qc |
| Qc: Quality Control Summary | 10 | |
| Wet Chemistry by Method 4500CN E-2016 | 10 | ⁷ Gl |
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| Al: Accreditations & Locations | 12 | ⁸ Al |
| Sc: Sample Chain of Custody | 13 | ⁹ Sc |

2206528-001F EB-6-8-22 L1504798-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882735 | 1 | 06/22/22 07:02 | 06/22/22 18:17 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/08/22 08:10
06/14/22 08:45

¹Cp

²Tc

³Ss

2206528-002F OW-63 L1504798-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882735 | 1 | 06/22/22 07:02 | 06/22/22 18:19 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/08/22 08:15
06/14/22 08:45

⁴Cn

⁵Sr

2206528-003F OW-64 L1504798-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882735 | 1 | 06/22/22 07:02 | 06/22/22 18:20 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/08/22 08:50
06/14/22 08:45

⁶Qc

⁷Gl

⁸Al

2206528-004F OW-10 L1504798-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882735 | 1 | 06/22/22 07:02 | 06/22/22 18:21 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/08/22 09:20
06/14/22 08:45

⁹Sc

2206528-006F DUP-6-8-22 L1504798-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882735 | 1 | 06/22/22 07:02 | 06/22/22 18:24 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/08/22 00:00
06/14/22 08:45

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 18:17 | WG1882735 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 11.2 | | 1.80 | 5.00 | 1 | 06/22/2022 18:19 | WG1882735 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 18:20 | WG1882735 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 18:21 | WG1882735 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 18:24 | WG1882735 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3806296-1 06/22/22 17:47

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1504409-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1504409-01 06/22/22 18:08 • (DUP) R3806296-7 06/22/22 18:12

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

L1504798-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1504798-01 06/22/22 18:17 • (DUP) R3806296-8 06/22/22 18:18

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3806296-2 06/22/22 17:48

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 107 | 107 | 87.1-120 | |

L1503089-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503089-02 06/22/22 17:53 • (MS) R3806296-3 06/22/22 17:54 • (MSD) R3806296-4 06/22/22 17:55

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 56.8 | 67.5 | 56.8 | 67.5 | 1 | 90.0-110 | J6 | J6 | 17.2 | 20 |

L1503588-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503588-02 06/22/22 18:02 • (MS) R3806296-5 06/22/22 18:03 • (MSD) R3806296-6 06/22/22 18:04

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 93.5 | 99.2 | 93.5 | 99.2 | 1 | 90.0-110 | | | 5.92 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

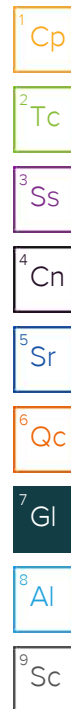
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|



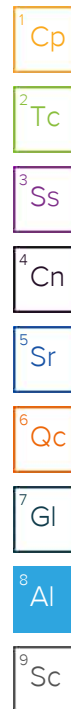
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





**ENVIRONMENTAL
ANALYSIS
LABORATORY**

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

F123

Page 2110 of 5177
Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|---------------------|--------------|--------------------------------|
| 1 | 2206528-001F | EB-6-8-22 | 500AMBHDP
E-NAOH | Groundw
ater | 6/8/2022 8:10:00 AM | 1 | Total Cyanide <i>5 and MDL</i> |
| 2 | 2206528-002F | OW-63 | 500AMBHDP
E-NAOH | Groundw
ater | 6/8/2022 8:15:00 AM | 1 | Total Cyanide |
| 3 | 2206528-003F | OW-64 | 500AMBHDP
E-NAOH | Groundw
ater | 6/8/2022 8:50:00 AM | 1 | Total Cyanide |
| 4 | 2206528-004F | OW-10 | 500AMBHDP
E-NAOH | Groundw
ater | 6/8/2022 9:20:00 AM | 1 | Total Cyanide |
| 5 | 2206528-006F | DUP-6-8-22 | 500AMBHDP
E-NAOH | Groundw
ater | 6/8/2022 | 1 | Total Cyanide |

Cmc Glucose

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------------|-----------------------|---------------------------------|----------------------|-------------------|---|--|
| Relinquished By: <i>Cmc</i> | Date: 6/10/2022 | Time: 12:55 PM | Received By: <i>[Signature]</i> | Date: 6/14/22 | Time: 8:45 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples <i>2.70=2.7 c</i> Attempt to Cool? _____
<i>DRA7</i> | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |



July 08, 2022

Vista Work Order No. 2206101

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on June 10, 2022 under your Project Name '2206528'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at jfox@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Jamie Fox
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2206101

Case Narrative

Sample Condition on Receipt:

Two aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:

PFAS Isotope Dilution Method

Sample "OW-63" contained particulate and was centrifuged prior to extraction.

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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| Qualifiers..... | 14 |
| Certifications..... | 15 |
| Sample Receipt..... | 18 |

Sample Inventory Report



| Vista
Sample ID | Client
Sample ID | Sampled | Received | Components/Containers |
|--------------------|----------------------|-----------------|-----------------|-----------------------|
| 2206101-01 | OW-63 | 08-Jun-22 08:15 | 10-Jun-22 08:58 | HDPE Bottle, 250 mL |
| 2206101-02 | Equipment Blank-PFAS | 08-Jun-22 08:15 | 10-Jun-22 08:58 | HDPE Bottle, 250 mL |

ANALYTICAL RESULTS

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | |
|-------------------------|--|--------------|----------|-----------------|------------------------------|-----------|-----------|-----------------|----------|
| Client Data | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22F113-BLK1 | Column: | BEH C18 | | |
| Project: | 2206528 | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFPeA | 2706-90-3 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFBS | 375-73-5 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 4:2 FTS | 757124-72-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFHxA | 307-24-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFPeS | 2706-91-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFHpA | 375-85-9 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFHxS | 355-46-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFOA | 335-67-1 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFHpS | 375-92-8 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFNA | 375-95-1 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFOSA | 754-91-6 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFOS | 1763-23-1 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFDA | 335-76-2 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFNS | 68259-12-1 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| MeFOSAA | 2355-31-9 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| EtFOSAA | 2991-50-6 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFUnA | 2058-94-8 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFDS | 335-77-3 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFDoA | 307-55-1 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFTTrDA | 72629-94-8 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| PFTeDA | 376-06-7 | ND | 2.00 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 76.2 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C3-PFPeA | IS | 86.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C3-PFBS | IS | 72.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C2-4:2 FTS | IS | 89.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C2-PFHxA | IS | 81.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C4-PFHpA | IS | 71.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C3-PFHxS | IS | 76.2 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C2-6:2 FTS | IS | 84.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C2-PFOA | IS | 88.9 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C5-PFNA | IS | 78.7 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C8-PFOSA | IS | 43.2 | 10 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C8-PFOS | IS | 78.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |
| 13C2-PFDA | IS | 76.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 |

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | | |
|--|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2206528</div> <div>Matrix: Aqueous</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: B22F113-BLK1
Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-8:2 FTS | IS | 60.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |
| d3-MeFOSAA | IS | 69.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |
| d5-EtFOSAA | IS | 59.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |
| 13C2-PFUnA | IS | 62.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |
| 13C2-PFDoA | IS | 59.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |
| 13C2-PFTeDA | IS | 60.1 | 20 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 07:54 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | | | Laboratory Data | | | | | |
|-------------------|--|------------------|-----------|---------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | | Lab Sample: | B22F113-BS1 | | Column: | BEH C18 | |
| Project: | 2206528 | | | | | | | | | | |
| Analyte | CAS Number | Amt Found (ng/L) | Spike Amt | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 46.9 | 40.0 | 117 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFPeA | 2706-90-3 | 34.4 | 40.0 | 85.9 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFBS | 375-73-5 | 37.5 | 40.0 | 93.7 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 4:2 FTS | 757124-72-4 | 44.8 | 40.0 | 112 | 60 - 145 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFHxA | 307-24-4 | 42.5 | 40.0 | 106 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFPeS | 2706-91-4 | 40.6 | 40.0 | 101 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFHpA | 375-85-9 | 38.4 | 40.0 | 96.0 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFHxS | 355-46-4 | 37.6 | 40.0 | 94.1 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 6:2 FTS | 27619-97-2 | 41.9 | 40.0 | 105 | 60 - 140 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFOA | 335-67-1 | 35.3 | 40.0 | 88.2 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFHpS | 375-92-8 | 42.7 | 40.0 | 107 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFNA | 375-95-1 | 43.6 | 40.0 | 109 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFOSA | 754-91-6 | 41.8 | 40.0 | 105 | 65 - 140 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFOS | 1763-23-1 | 40.5 | 40.0 | 101 | 65 - 140 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFDA | 335-76-2 | 40.5 | 40.0 | 101 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 8:2 FTS | 39108-34-4 | 36.8 | 40.0 | 92.1 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFNS | 68259-12-1 | 34.9 | 40.0 | 87.2 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| MeFOSAA | 2355-31-9 | 43.2 | 40.0 | 108 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| EtFOSAA | 2991-50-6 | 36.5 | 40.0 | 91.3 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFUnA | 2058-94-8 | 37.9 | 40.0 | 94.9 | 65 - 140 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFDS | 335-77-3 | 30.8 | 40.0 | 76.9 | 50 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFDaA | 307-55-1 | 38.6 | 40.0 | 96.6 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFTTrDA | 72629-94-8 | 41.7 | 40.0 | 104 | 60 - 140 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| PFTeDA | 376-06-7 | 35.1 | 40.0 | 87.9 | 65 - 135 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| Labeled Standards | Type | | | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | | | 79.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C3-PFPeA | IS | | | 88.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C3-PFBS | IS | | | 72.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-4:2 FTS | IS | | | 94.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFHxA | IS | | | 81.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C4-PFHpA | IS | | | 70.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C3-PFHxS | IS | | | 80.1 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-6:2 FTS | IS | | | 83.7 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFOA | IS | | | 95.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C5-PFNA | IS | | | 80.9 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | Laboratory Data | | | | | |
|-------------------|--|---------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22F113-BS1 | Column: | BEH C18 | | |
| Project: | 2206528 | | | | | | | | |
| Labeled Standards | Type | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C8-PFOSA | IS | 51.6 | 10 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C8-PFOS | IS | 81.9 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFDA | IS | 73.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-8:2 FTS | IS | 62.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| d3-MeFOSAA | IS | 61.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| d5-EtFOSAA | IS | 65.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFUnA | IS | 61.9 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFDoA | IS | 56.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |
| 13C2-PFTeDA | IS | 58.4 | 20 - 150 | | B22F113 | 28-Jun-22 | 0.250 L | 30-Jun-22 08:05 | 1 |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|-------------------|--|--------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2206101-01 | | Column: | BEH C18 | |
| Project: | 2206528 | | Date Collected: | 08-Jun-22 08:15 | Date Received: | 10-Jun-22 08:58 | | | | |
| Location: | 2206528-002I | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFPeA | 2706-90-3 | 445 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFBS | 375-73-5 | 40.2 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFHxA | 307-24-4 | 442 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFPeS | 2706-91-4 | 53.3 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFHpA | 375-85-9 | 128 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFHxS | 355-46-4 | 232 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 6:2 FTS | 27619-97-2 | 712 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFOA | 335-67-1 | 110 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFHpS | 375-92-8 | 13.2 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFNA | 375-95-1 | 604 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFOSA | 754-91-6 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFOS | 1763-23-1 | 360 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFDA | 335-76-2 | 13.2 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 8:2 FTS | 39108-34-4 | 71.7 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFNS | 68259-12-1 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFUnA | 2058-94-8 | 103 | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFDS | 335-77-3 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFDoA | 307-55-1 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| PFTeDA | 376-06-7 | ND | 2.08 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 48.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C3-PFPeA | IS | 93.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C3-PFBS | IS | 57.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-4:2 FTS | IS | 75.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-PFHxA | IS | 72.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C4-PFHpA | IS | 60.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C3-PFHxS | IS | 73.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-6:2 FTS | IS | 89.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-PFOA | IS | 97.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C5-PFNA | IS | 68.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C8-PFOSA | IS | 49.1 | 10 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C8-PFOS | IS | 77.9 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|---|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2206528
Location: 2206528-002I</div> <div>Matrix: Aqueous
Date Collected: 08-Jun-22 08:15</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: 2206101-01
Date Received: 10-Jun-22 08:58</div> <div>Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-PFDA | IS | 72.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-8:2 FTS | IS | 67.1 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| d3-MeFOSAA | IS | 72.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| d5-EtFOSAA | IS | 68.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-PFUnA | IS | 62.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-PFDoA | IS | 58.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |
| 13C2-PFTeDA | IS | 42.9 | 20 - 150 | | B22F113 | 28-Jun-22 | 0.240 L | 30-Jun-22 08:25 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

| Sample ID: Equipment Blank-PFAS | | | | | PFAS Isotope Dilution Method | | | | | | |
|---------------------------------|--|--------------|-----------------|-----------------|------------------------------|----------------|-----------------|-----------------|----------|---------|--|
| Client Data | | | | Laboratory Data | | | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | | Lab Sample: | 2206101-02 | | Column: | BEH C18 | |
| Project: | 2206528 | | Date Collected: | 08-Jun-22 08:15 | | Date Received: | 10-Jun-22 08:58 | | | | |
| Location: | 2206528-008A | | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | | |
| PFBA | 375-22-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFPeA | 2706-90-3 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFBS | 375-73-5 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 4:2 FTS | 757124-72-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFHxA | 307-24-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFPeS | 2706-91-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFHpA | 375-85-9 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFHxS | 355-46-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 6:2 FTS | 27619-97-2 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFOA | 335-67-1 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFHpS | 375-92-8 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFNA | 375-95-1 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFOSA | 754-91-6 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFOS | 1763-23-1 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFDA | 335-76-2 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 8:2 FTS | 39108-34-4 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFNS | 68259-12-1 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| MeFOSAA | 2355-31-9 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| EtFOSAA | 2991-50-6 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFUnA | 2058-94-8 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFDS | 335-77-3 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFDoA | 307-55-1 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFTTrDA | 72629-94-8 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| PFTeDA | 376-06-7 | ND | 2.04 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | | |
| 13C3-PFBA | IS | 79.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C3-PFPeA | IS | 87.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C3-PFBS | IS | 75.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C2-4:2 FTS | IS | 107 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C2-PFHxA | IS | 77.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C4-PFHpA | IS | 71.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C3-PFHxS | IS | 84.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C2-6:2 FTS | IS | 87.0 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C2-PFOA | IS | 91.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C5-PFNA | IS | 82.6 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C8-PFOSA | IS | 58.3 | 10 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |
| 13C8-PFOS | IS | 72.3 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 | | |

| Sample ID: Equipment Blank-PFAS | | | | | PFAS Isotope Dilution Method | | | | |
|---|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2206528
Location: 2206528-008A</div> <div>Matrix: Aqueous
Date Collected: 08-Jun-22 08:15</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: 2206101-02
Date Received: 10-Jun-22 08:58</div> <div>Column: BEH C18</div> | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C2-PFDA | IS | 77.7 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| 13C2-8:2 FTS | IS | 64.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| d3-MeFOSAA | IS | 77.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| d5-EtFOSAA | IS | 72.8 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| 13C2-PFUnA | IS | 65.5 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| 13C2-PFDoA | IS | 67.4 | 25 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |
| 13C2-PFTeDA | IS | 68.7 | 20 - 150 | | B22F113 | 28-Jun-22 | 0.246 L | 30-Jun-22 08:36 | 1 |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

| | |
|---------|--|
| B | This compound was also detected in the method blank |
| Conc. | Concentration |
| CRS | Cleanup Recovery Standard |
| D | Dilution |
| DL | Detection Limit |
| E | The associated compound concentration exceeded the calibration range of the instrument |
| H | Recovery and/or RPD was outside laboratory acceptance limits |
| I | Chemical Interference |
| IS | Internal Standard |
| J | The amount detected is below the Reporting Limit/LOQ |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| M | Estimated Maximum Possible Concentration (CA Region 2 projects only) |
| MDL | Method Detection Limit |
| NA | Not applicable |
| ND | Not Detected |
| OPR | Ongoing Precision and Recovery sample |
| P | The reported concentration may include contribution from chlorinated diphenyl ether(s). |
| Q | The ion transition ratio is outside of the acceptance criteria. |
| RL | Reporting Limit |
| RL | For 537.1, the reported RLs are the MRLs. |
| TEQ | Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations. |
| TEQMax | TEQ calculation that uses the detection limit as the concentration for non-detects |
| TEQMin | TEQ calculation that uses zero as the concentration for non-detects |
| TEQRisk | TEQ calculation that uses ½ the detection limit as the concentration for non-detects |
| U | Not Detected (specific projects only) |
| * | See Cover Letter |

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

| Accrediting Authority | Certificate Number |
|--|---------------------------|
| Alaska Department of Environmental Conservation | 17-013 |
| Arkansas Department of Environmental Quality | 21-023-0 |
| California Department of Health – ELAP | 2892 |
| DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005 | 3091.01 |
| Florida Department of Health | E87777 |
| Hawaii Department of Health | N/A |
| Louisiana Department of Environmental Quality | 01977 |
| Maine Department of Health | 2020018 |
| Massachusetts Department of Environmental Protection | M-CA413 |
| Michigan Department of Environmental Quality | 9932 |
| Minnesota Department of Health | 2211390 |
| New Hampshire Environmental Accreditation Program | 207721 |
| New Jersey Department of Environmental Protection | CA003 |
| New York Department of Health | 11411 |
| Ohio Environmental Protection Agency | 87778 |
| Oregon Laboratory Accreditation Program | 4042-021 |
| Pennsylvania Department of Environmental Protection | 018 |
| Texas Commission on Environmental Quality | T104704189-22-13 |
| Vermont Department of Health | VT-4042 |
| Virginia Department of General Services | 11276 |
| Washington Department of Ecology | C584 |
| Wisconsin Department of Natural Resources | 998036160 |

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

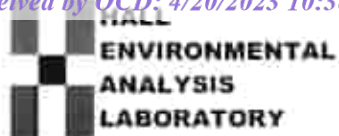
| MATRIX: Air | |
|---|-----------|
| Description of Test | Method |
| Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans | EPA 23 |
| Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS | EPA TO-9A |

| MATRIX: Biological Tissue | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Drinking Water | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613/1613B |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537.1 |
| Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry | EPA 533 |
| Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry | ISO 25101 2009 |

| MATRIX: Non-Potable Water | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Dioxin by GC/HRMS | EPA 613 |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Solids | |
|---|-----------------------|
| Description of Test | Method |
| Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613 |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |



CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

Page 2128 of 5177
Hall Environmental Analysis Laboratory
4901 Hudson NE
Albuquerque, NM 87109
TEL: 505-245-3975
FAX: 505-245-4109
Website: www.hallenvironmental.com

J206101

J.J.C

| SUBSTRATOR: Vista Analytical Labor | | COMPANY: Vista Analytical Laboratory | | PHONE: (916) 673-1520 | | FAX: | |
|---|--------------|--------------------------------------|-------------|-----------------------|---------------------|--------------|---|
| ADDRESS: 1104 Windfield Way | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: El Dorado Hills, CA 95762 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206528-002I | OW-63 | 250HDPE | Aqueous | 6/8/2022 8:15:00 AM | 1 | 24 compound PFAS testing unchlorinated sample - J and MDL |
| 2 | 2206528-008A | Equipment Blank- PFAS | 250HDPE | Aqueous | 6/8/2022 8:15:00 AM | 1 | 24 compound PFAS testing unchlorinated sample - J and MDL |

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to labs@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|----------------|---------------|-------------------------------------|--------------|------------|--|--|
| Relinquished By: | Date: 6/9/2022 | Time: 1:12 PM | Received By: <i>Kelia Wadsworth</i> | Date: 6/9/22 | Time: 0858 | REPORT TRANSMITTAL DESIRED
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples _____ °C Attempt to Cool? _____ | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |



Sample Log-In Checklist

Page # 1 of 1Vista Work Order #: 2206101 TAT 5/2

| | | | |
|---------------------|-----------------------------------|--------------------------|-----------------------------|
| Samples Arrival: | Date/Time
<u>06/10/22 0958</u> | Initials:
<u>KW</u> | Location: <u>VR-2</u> |
| | | | Shelf/Rack: <u>N/A</u> |
| Delivered By: | <u>FedEx</u> | UPS | On Trac |
| | | GLS | DHL |
| | | Hand Delivered | Other |
| Preservation: | Ice | <u>Blue Ice</u> | Techni Ice |
| | | Dry Ice | None |
| Temp °C: <u>1.2</u> | (uncorrected) | Probe used: Y / <u>N</u> | Thermometer ID: <u>IR-3</u> |
| Temp °C: <u>1.1</u> | (corrected) | | |

| | YES | NO | NA |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Shipping Container(s) Intact? | ☒ | | |
| Shipping Custody Seals Intact? | ☒ | | |
| Airbill <u>7770 9099 1501</u> | ☒ | | |
| Shipping Documentation Present? | ☒ | | |
| Shipping Container | Vista | <u>Client</u> | Retain |
| | | <u>Return</u> | Dispose |
| Chain of Custody / Sample Documentation Present? | ☒ | | |
| Chain of Custody / Sample Documentation Complete? | ☒ | | |
| Holding Time Acceptable? | ☒ | | |
| Logged In: | Date/Time
<u>06/21/22 07:25</u> | Initials:
<u>KW</u> | Location: <u>R-13</u> |
| | | | Shelf/Rack: <u>A-4</u> |
| COC Anomaly/Sample Acceptance Form completed? | | ☒ | ☒ |

Comments:

CoC/Label Reconciliation Report WO# 2206101

| Lab Number | CoC Sample ID | Sample Alias | Sample Date/Time | Container | Base Matrix | Sample Comments |
|------------|------------------------|--------------|------------------|---------------------|-------------|-----------------|
| 2206101-01 | A OW-63 | 2206528-0021 | 08-Jun-22 08:15 | HDPE Bottle, 250 mL | Aqueous | |
| 2206101-02 | A Equipment Blank-PFAS | 2206528-006A | 08-Jun-22 08:15 | HDPE Bottle, 250 mL | Aqueous | |

Checkmarks indicate that information on the COC reconciled with the sample label.

Any discrepancies are noted in the following columns.

| | Yes | No | NA |
|---|-------------------------------------|----|-------------------------------------|
| Sample Container Intact? | ☒ | | |
| Sample Custody Seals Intact? | | | ☒ |
| Adequate Sample Volume? | ☒ | | |
| Container Type Appropriate for Analysis(es) | ☒ | | |

Comments: A ESS Trizma Label

A No back up volume

Preservation Documented: Na2S2O3 Trizma NH4CH3CO2 None Other

Verified by/Date: 164 06/21/22

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68127 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153628 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-68127 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153629 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 93.1 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Chromium | 0.0067 | 0.0060 | 0.006000 | 0 | 111 | 50 | 150 | | | |
| Cobalt | 0.0080 | 0.0060 | 0.006000 | 0 | 133 | 50 | 150 | | | |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.4 | 50 | 150 | | | J |
| Silver | 0.0054 | 0.0050 | 0.005000 | 0 | 108 | 50 | 150 | | | |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 96.8 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 106 | 50 | 150 | | | |

| Sample ID: LCS-68127 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153630 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.6 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 2206528-001DMS | | SampType: MS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: EB-6-8-22 | | Batch ID: 68127 | | | RunNo: 88823 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/16/2022 | | | SeqNo: 3153642 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 108 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 105 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2206528-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-6-8-22 | | Batch ID: 68127 | | RunNo: 88823 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/16/2022 | | SeqNo: 3153643 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 101 | 70 | 130 | 4.88 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | 0.580 | 20 | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.1 | 70 | 130 | 5.06 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.3 | 70 | 130 | 5.41 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.8 | 70 | 130 | 4.25 | 20 | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 70 | 130 | 5.12 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | 5.10 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | 3.57 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.5 | 70 | 130 | 4.97 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B88662 | RunNo: 88662 | | | | | | | | |
| Prep Date: | Analysis Date: 6/12/2022 | SeqNo: 3146923 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LL LCS | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B88662 | RunNo: 88662 | | | | | | | | |
| Prep Date: | Analysis Date: 6/12/2022 | SeqNo: 3146924 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0020 | 0.002000 | 0 | 87.2 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 103 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.0 | 50 | 150 | | | J |
| Chromium | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Cobalt | 0.0072 | 0.0060 | 0.006000 | 0 | 120 | 50 | 150 | | | |
| Nickel | 0.0055 | 0.010 | 0.005000 | 0 | 111 | 50 | 150 | | | J |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 114 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 144 | 50 | 150 | | | |

| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B88662 | RunNo: 88662 | | | | | | | | |
| Prep Date: | Analysis Date: 6/12/2022 | SeqNo: 3146925 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Chromium | 0.54 | 0.0060 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Nickel | 0.52 | 0.010 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 111 | 85 | 115 | | | |
| Vanadium | 0.56 | 0.050 | 0.5000 | 0 | 111 | 85 | 115 | | | |
| Zinc | 0.56 | 0.010 | 0.5000 | 0 | 111 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-68127 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68127 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155291 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-68127 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68127 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155292 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00096 | 0.0010 | 0.001000 | 0 | 96.0 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.00084 | 0.0010 | 0.001000 | 0 | 84.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68127 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155293 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.6 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.5 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2206528-003DMSLL SampType: MS TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: OW-64 | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155350 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.028 | 0.0010 | 0.02500 | 0 | 110 | 70 | 130 | | | |
| Lead | 0.010 | 0.00050 | 0.01250 | 0.0007734 | 76.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|-------|----------|------|
| Sample ID: 2206528-003DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: OW-64 | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155351 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 106 | 70 | 130 | 3.40 | 20 | |
| Lead | 0.010 | 0.00050 | 0.01250 | 0.0007734 | 77.1 | 70 | 130 | 0.289 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: 2206528-003DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-64 | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3156050 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.029 | 0.0050 | 0.02500 | 0.002555 | 107 | 70 | 130 | | | |
| Selenium | 0.024 | 0.0050 | 0.02500 | 0 | 96.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2206528-003DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: OW-64 | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3156051 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.030 | 0.0050 | 0.02500 | 0.002555 | 109 | 70 | 130 | 1.78 | 20 | |
| Selenium | 0.026 | 0.0050 | 0.02500 | 0 | 103 | 70 | 130 | 5.87 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A88688 | RunNo: 88688 | | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148253 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A88688 | RunNo: 88688 | | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148254 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00053 | 0.00050 | 0.0005000 | 0 | 105 | 50 | 150 | | | |
| Selenium | 0.00087 | 0.0010 | 0.001000 | 0 | 86.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A88688 | RunNo: 88688 | | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148255 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.0 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.5 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68088 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68088 | RunNo: 88725 |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150004 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-68088 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68088 | RunNo: 88725 |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150005 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00019 0.00020 0.0001500 | 0 124 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68088 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68088 | RunNo: 88725 |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150006 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0052 0.00020 0.005000 | 0 104 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68078 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150157 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68078 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150158 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68078 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150159 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 119 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68078 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150161 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 117 | 70 | 130 | 1.67 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68038 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68038 | | RunNo: 88762 | | | | | | | |
| Prep Date: 6/10/2022 | Analysis Date: 6/15/2022 | | SeqNo: 3152581 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.029 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 101 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68038 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68038 | | RunNo: 88762 | | | | | | | |
| Prep Date: 6/10/2022 | Analysis Date: 6/15/2022 | | SeqNo: 3152583 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 1.2 | 0.064 | 0.1875 | 0 | 642 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.015 | | 0.01875 | | 81.2 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68038 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68038 | | RunNo: 88762 | | | | | | | |
| Prep Date: 6/10/2022 | Analysis Date: 6/15/2022 | | SeqNo: 3152801 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 77.6 | 31.7 | 75.4 | 157 | 20 | RS |
| Surr: DNOP | 0.019 | | 0.01875 | | 99.9 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | | SeqNo: 3150185 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 96.2 | 80 | 120 | | | |
| Surr: BFB | 40 | | 20.00 | | 199 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | | SeqNo: 3150186 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 97.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206528-001AMS | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-6-8-22 | Batch ID: A88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | | SeqNo: 3150188 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.47 | 0.050 | 0.5000 | 0 | 94.2 | 70 | 130 | | | |
| Surr: BFB | 39 | | 20.00 | | 194 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206528-001AMSD | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-6-8-22 | Batch ID: A88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | | SeqNo: 3150189 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.45 | 0.050 | 0.5000 | 0 | 90.2 | 70 | 130 | 4.38 | 20 | |
| Surr: BFB | 37 | | 20.00 | | 187 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153564 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.9 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206528-003ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-64 | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153570 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 32 | 1.0 | 20.00 | 12.08 | 98.8 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 92.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.4 | | 10.00 | | 93.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 91.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 112 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 92.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206528-003amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-64 | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153571 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 29 | 1.0 | 20.00 | 12.08 | 84.4 | 70 | 130 | 9.48 | 20 | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 93.6 | 70 | 130 | 7.40 | 20 | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 95.5 | 70 | 130 | 6.20 | 20 | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 82.0 | 70 | 130 | 11.5 | 20 | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | 9.39 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 92.1 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.0 | | 10.00 | | 90.4 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.7 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R88822 | | | RunNo: 88822 | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | | SeqNo: 3153586 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.8 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A88912 | | | RunNo: 88912 | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | | SeqNo: 3157839 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: A88912 | | | RunNo: 88912 | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | | SeqNo: 3157839 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: A88912 | | | RunNo: 88912 | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | | SeqNo: 3157862 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68135 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68135 | | | RunNo: 89063 | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | | SeqNo: 3163448 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.0 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 94 | | 200.0 | | 46.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 64.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.7 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 94.8 | 48 | 155 | | | |

| Sample ID: lcs-68135 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68135 | | | RunNo: 89063 | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | | SeqNo: 3163449 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68135 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68135 | | RunNo: 89063 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | SeqNo: 3163449 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 73 | 10 | 100.0 | 0 | 72.6 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 65 | 5.0 | 100.0 | 0 | 64.7 | 15 | 89.8 | | | |
| Phenol | 95 | 20 | 200.0 | 0 | 47.3 | 17 | 61.1 | | | |
| Pyrene | 100 | 10 | 100.0 | 0 | 103 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 56.5 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 44.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 73.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.5 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 71 | | 100.0 | | 71.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 105 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: lcsd-68135 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68135 | | RunNo: 89063 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | SeqNo: 3163450 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 76 | 10 | 100.0 | 0 | 76.2 | 21.3 | 104 | 4.75 | 45.3 | |
| 1,4-Dichlorobenzene | 68 | 5.0 | 100.0 | 0 | 68.3 | 15 | 89.8 | 5.40 | 39.6 | |
| Phenol | 97 | 20 | 200.0 | 0 | 48.4 | 17 | 61.1 | 2.29 | 42.5 | |
| Pyrene | 100 | 10 | 100.0 | 0 | 102 | 61 | 123 | 0.461 | 11.8 | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 57.6 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 45.2 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 73.9 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 75.2 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 74 | | 100.0 | | 73.6 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68135 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68135 | RunNo: 88923 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157888 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 81 | | 100.0 | | 81.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 120 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68135 lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68135 | RunNo: 88923 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157889 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.82 | 0.10 | 2.000 | 0 | 41.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 84.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 105 | 51 | 147 | | | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 80 | | 100.0 | | 80.4 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206528

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: lcs-68135 lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68135 | | RunNo: 88923 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/21/2022 | | SeqNo: 3157889 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 73 | | 100.0 | | 73.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.7 | 72.3 | 147 | | | |

| Sample ID: lcsd-68135 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68135 | | | RunNo: 88923 | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | | | SeqNo: 3157890 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | 2.47 | 30.1 | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21.3 | 79.9 | 3.08 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 1.55 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 20.6 | 80.1 | 1.55 | 25 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 33.3 | 86 | 2.63 | 26.4 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 38.2 | 93.9 | 5.13 | 27.9 | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 41.1 | 95.6 | 5.85 | 25.6 | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 104 | 52.9 | 123 | 4.93 | 22.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 51 | 113 | 6.90 | 20 | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 111 | 51 | 147 | 5.56 | 24.1 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | 3.64 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 44.4 | 136 | 3.43 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 31.4 | 165 | 0 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 78.6 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 89 | | 200.0 | | 44.5 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.2 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2206528

RcptNo: 1

Received By: Cheyenne Cason 6/9/2022 7:20:00 AM

Completed By: Desiree Dominguez 6/9/2022 11:45:40 AM

Reviewed By: CMC 6/9/22
CME 6/10/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 10 5
(2 or 12 unless noted)

Adjusted? yes

Checked by: KPG 6-10-22

Plus TMC 6/10/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: Added 0.5ml of HNO_3 to sample 003F for pH

17. Cooler Information 2 - KPG 6-10-22

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.5 | Good | | | | |
| 2 | 3.9 | Good | | | | |
| 3 | 3.8 | Good | | | | |

If necessary, samples submitted to Hal Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 08, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 2nd Qtr

OrderNo.: 2206602

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/10/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206602
Date: 7/8/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Qtr

Analytical notes Regarding EPA Method 8270:

Sample OW-29 had poor surrogate recoveries due to the emulsive nature of the sample.

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/15/2022 1:39:00 AM | C88732 |
| Surr: BFB | 95.1 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 1:39:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Methylene Chloride | 370 | 5.0 | 30 | | µg/L | 10 | 6/22/2022 12:57:30 PM | A88962 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Surr: Dibromofluoromethane | 125 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:27:39 PM | R88822 |
| Surr: Toluene-d8 | 87.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:27:39 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 2:49:21 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.017 | 0.016 | 0.064 | J | mg/L | 1 | 6/20/2022 6:08:32 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 6:08:32 PM | 68123 |
| Surr: DNOP | 89.2 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 6:08:32 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: 2-Fluorophenol | 57.9 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: Phenol-d5 | 44.4 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: 2,4,6-Tribromophenol | 66.9 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: Nitrobenzene-d5 | 74.8 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 71.7 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 93.3 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 11:47:20 AM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 8:01:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 81.7 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 71.7 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 8:01:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 103 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 8:01:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 4:59:12 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:32:50 AM | 68127 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:32:50 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:32:50 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:32:50 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:49:00 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:00:00 AM

Lab ID: 2206602-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| Zinc | 0.0065 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 6:48:54 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 12:45:06 PM | C88688 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/13/2022 12:45:06 PM | C88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/13/2022 2:32:41 PM | C88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 12:45:06 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 1:51:09 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:30:00 AM

Lab ID: 2206602-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.023 | 0.0090 | 0.050 | J | mg/L | 1 | 6/15/2022 2:37:00 AM | C88732 |
| Surr: BFB | 95.3 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 2:37:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 26 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Surr: Dibromofluoromethane | 123 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:56:52 PM | R88822 |
| Surr: Toluene-d8 | 85.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 4:56:52 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:30:00 AM

Lab ID: 2206602-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 3:04:36 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:30:00 AM

Lab ID: 2206602-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.078 | 0.016 | 0.064 | | mg/L | 1 | 6/20/2022 6:32:47 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 6:32:47 PM | 68123 |
| Surr: DNOP | 92.1 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 6:32:47 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: 2-Fluorophenol | 57.5 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: Phenol-d5 | 44.4 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 67.9 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: Nitrobenzene-d5 | 72.1 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 74.2 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 91.9 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 12:29:03 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.9 | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 8:48:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206602**Date Reported: **7/8/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** BW-5C**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/9/2022 9:30:00 AM**Lab ID:** 2206602-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 79.0 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 70.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 8:48:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 96.8 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 8:48:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:30:00 AM

Lab ID: 2206602-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Chromium | 0.0064 | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Cobalt | 0.0040 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Vanadium | 0.0089 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| Zinc | 0.0065 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 5:00:48 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/20/2022 12:36:54 PM | 68127 |
| Arsenic | 0.00076 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 12:36:54 PM | 68127 |
| Lead | 0.0014 | 0.00031 | 0.0025 | J | mg/L | 5 | 6/20/2022 12:36:54 PM | 68127 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 12:36:54 PM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 6/14/2022 1:53:18 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:30:00 AM

Lab ID: 2206602-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.099 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Cobalt | 0.0029 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Vanadium | 0.0026 | 0.0017 | 0.050 | J | mg/L | 1 | 6/14/2022 6:11:37 PM | A88751 |
| Zinc | 0.0086 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 6:55:29 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/13/2022 2:40:45 PM | C88688 |
| Arsenic | 0.00055 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 12:53:09 PM | C88688 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/13/2022 2:40:45 PM | C88688 |
| Selenium | 0.00040 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/13/2022 12:53:09 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 2:55:04 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.051 | 0.0090 | 0.050 | | mg/L | 1 | 6/15/2022 2:57:00 AM | C88732 |
| Surr: BFB | 93.8 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 2:57:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 66 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 98.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 98.7 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Surr: Dibromofluoromethane | 121 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:26:07 PM | R88822 |
| Surr: Toluene-d8 | 85.6 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:26:07 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 3:19:49 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.046 | 0.016 | 0.064 | J | mg/L | 1 | 6/20/2022 6:57:01 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 6:57:01 PM | 68123 |
| Surr: DNOP | 94.3 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 6:57:01 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: 2-Fluorophenol | 63.4 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: Phenol-d5 | 48.6 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 68.1 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: Nitrobenzene-d5 | 69.7 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 86.0 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 1:10:34 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 9:34:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 77.6 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 69.6 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 9:34:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 97.5 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 9:34:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.054 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| Zinc | 0.0043 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 5:07:12 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:37:43 AM | 68127 |
| Arsenic | 0.0022 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:37:43 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:37:43 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:37:43 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 2:57:14 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:30:00 AM

Lab ID: 2206602-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.054 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/14/2022 6:13:20 PM | A88751 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 7:04:55 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 12:58:31 PM | C88688 |
| Arsenic | 0.0020 | 0.00012 | 0.0010 | | mg/L | 1 | 6/13/2022 12:58:31 PM | C88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 10:48:27 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 12:58:31 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 2:59:22 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.0094 | 0.0090 | 0.050 | J | mg/L | 1 | 6/15/2022 3:17:00 AM | C88732 |
| Surr: BFB | 96.7 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 3:17:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 5.3 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Surr: Dibromofluoromethane | 124 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:55:21 PM | R88822 |
| Surr: Toluene-d8 | 88.5 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 5:55:21 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 3:35:08 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.31 | 0.016 | 0.064 | | mg/L | 1 | 6/20/2022 7:21:15 PM | 68123 |
| Motor Oil Range Organics (MRO) | 0.72 | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 7:21:15 PM | 68123 |
| Surr: DNOP | 58.0 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 7:21:15 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: 2-Fluorophenol | 46.5 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: Phenol-d5 | 36.8 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 53.1 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: Nitrobenzene-d5 | 56.6 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 55.5 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 66.8 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 1:52:13 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 10:21:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.1 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 67.4 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 10:21:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 96.2 | 0 | 72.3-147 | | %Rec | 1 | 6/21/2022 10:21:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.029 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 5:08:51 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:40:09 AM | 68127 |
| Arsenic | 0.00065 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/20/2022 11:40:09 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:40:09 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:40:09 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:01:31 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 10:50:00 AM

Lab ID: 2206602-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.028 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/14/2022 6:15:00 PM | A88751 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 7:07:16 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 1:01:13 PM | C88688 |
| Arsenic | 0.00058 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:01:13 PM | C88688 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/13/2022 2:54:14 PM | C88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 1:01:13 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:03:39 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 2.6 | 0.0090 | 0.050 | | mg/L | 1 | 6/15/2022 3:36:00 AM | C88732 |
| Surr: BFB | 92.7 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 3:36:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 2900 | 39 | 100 | | µg/L | 100 | 6/21/2022 4:04:13 PM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Methylene Chloride | 39 | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Surr: Dibromofluoromethane | 121 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:24:31 PM | R88822 |
| Surr: Toluene-d8 | 87.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:24:31 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 3:50:21 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.40 | 0.016 | 0.064 | | mg/L | 1 | 6/20/2022 8:09:46 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 8:09:46 PM | 68123 |
| Surr: DNOP | 84.2 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 8:09:46 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Di-n-butyl phthalate | 9.7 | 7.7 | 10 | J | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: 2-Fluorophenol | 20.4 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: Phenol-d5 | 16.6 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 42.2 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: Nitrobenzene-d5 | 26.7 | 0 | 36.9-103 | S | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 26.7 | 0 | 38.1-99.9 | S | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 52.0 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 2:34:05 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.46 | 0.11 | 1.0 | J | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/21/2022 11:08:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 35.3 | 0 | 31.6-100 | | %Rec | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 32.4 | 0 | 26.7-90.1 | | %Rec | 1 | 6/21/2022 11:08:00 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 57.7 | 0 | 72.3-147 | S | %Rec | 1 | 6/21/2022 11:08:00 PM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.082 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Nickel | 0.026 | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 5:10:30 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:47:31 AM | 68127 |
| Arsenic | ND | 0.00063 | 0.0050 | | mg/L | 5 | 6/20/2022 6:03:49 PM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:47:31 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:47:31 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:05:47 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:15:00 AM

Lab ID: 2206602-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.085 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Nickel | 0.025 | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/14/2022 6:16:38 PM | A88751 |
| Zinc | 0.12 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 7:09:33 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00067 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/21/2022 10:51:08 AM | B88918 |
| Arsenic | 0.00046 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/21/2022 10:51:08 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 10:51:08 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 10:51:08 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:07:56 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.11 | 0.0090 | 0.050 | | mg/L | 1 | 6/15/2022 1:49:00 PM | C88732 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 1:49:00 PM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 140 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,2-Dichloroethane (EDC) | 0.77 | 0.25 | 1.0 | J | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 94.3 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:53:47 PM | R88822 |
| Surr: Toluene-d8 | 87.9 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 6:53:47 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 4:05:36 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.039 | 0.016 | 0.064 | J | mg/L | 1 | 6/20/2022 8:33:54 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 8:33:54 PM | 68123 |
| Surr: DNOP | 95.5 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 8:33:54 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: 2-Fluorophenol | 41.5 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: Phenol-d5 | 31.7 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 53.5 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: Nitrobenzene-d5 | 49.3 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 48.9 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 73.2 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 3:15:51 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/22/2022 12:54:00 AM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.9 | 0 | 31.6-100 | | %Rec | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 55.9 | 0 | 26.7-90.1 | | %Rec | 1 | 6/22/2022 12:54:00 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 90.2 | 0 | 72.3-147 | | %Rec | 1 | 6/22/2022 12:54:00 AM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.021 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| Zinc | 0.0045 | 0.0039 | 0.010 | J | mg/L | 1 | 6/16/2022 5:12:08 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:52:23 AM | 68127 |
| Arsenic | 0.0012 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:52:23 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:52:23 AM | 68127 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:52:23 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:10:04 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.021 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 6/14/2022 6:18:19 PM | A88751 |
| Zinc | 0.0076 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 7:11:52 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 1:06:35 PM | C88688 |
| Arsenic | 0.00069 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:06:35 PM | C88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/13/2022 2:56:55 PM | C88688 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/13/2022 1:06:35 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:12:13 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 11:35:00 AM

Lab ID: 2206602-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Surr: Dibromofluoromethane | 126 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:22:54 PM | R88822 |
| Surr: Toluene-d8 | 89.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:22:54 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.016 | 0.0090 | 0.050 | J | mg/L | 1 | 6/15/2022 4:15:00 AM | C88732 |
| Surr: BFB | 94.2 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 4:15:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 15 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Surr: Dibromofluoromethane | 124 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:51:56 PM | R88822 |
| Surr: Toluene-d8 | 90.3 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 7:51:56 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 4:20:53 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.016 | 0.016 | 0.064 | J | mg/L | 1 | 6/20/2022 8:58:00 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 8:58:00 PM | 68123 |
| Surr: DNOP | 43.8 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 8:58:00 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: 2-Fluorophenol | 58.7 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: Phenol-d5 | 44.6 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 74.1 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: Nitrobenzene-d5 | 71.9 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 70.0 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 94.2 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 3:57:42 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.80 | 0.11 | 1.0 | J | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/22/2022 1:41:00 AM | 68135 |

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| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.9 | 0 | 31.6-100 | | %Rec | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/22/2022 1:41:00 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 97.8 | 0 | 72.3-147 | | %Rec | 1 | 6/22/2022 1:41:00 AM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.28 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Vanadium | 0.0096 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 5:13:47 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:54:50 AM | 68127 |
| Arsenic | 0.0010 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:54:50 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:54:50 AM | 68127 |
| Selenium | 0.0014 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:54:50 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:14:21 PM | 68089 |

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Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.27 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Vanadium | 0.0095 | 0.0017 | 0.050 | J | mg/L | 1 | 6/14/2022 6:25:00 PM | A88751 |
| Zinc | 0.0075 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 7:16:31 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/13/2022 1:17:22 PM | C88688 |
| Arsenic | 0.00089 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:17:22 PM | C88688 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/13/2022 2:59:37 PM | C88688 |
| Selenium | 0.00082 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:17:22 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:20:46 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.014 | 0.0090 | 0.050 | J | mg/L | 1 | 6/15/2022 4:35:00 AM | C88732 |
| Surr: BFB | 92.3 | 0 | 70-130 | | %Rec | 1 | 6/15/2022 4:35:00 AM | C88732 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | 8.7 | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Methylene Chloride | 52 | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 99.4 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Surr: Dibromofluoromethane | 122 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:20:55 PM | R88822 |
| Surr: Toluene-d8 | 88.7 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:20:55 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/14/2022 4:51:35 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | J | mg/L | 1 | 6/20/2022 9:22:05 PM | 68123 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/20/2022 9:22:05 PM | 68123 |
| Surr: DNOP | 83.5 | 0 | 42.2-138 | | %Rec | 1 | 6/20/2022 9:22:05 PM | 68123 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Pyridine | ND | 14 | 60 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: 2-Fluorophenol | 48.7 | 0 | 29.4-87.7 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: Phenol-d5 | 38.0 | 0 | 28.5-64.7 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: 2,4,6-Tribromophenol | 62.5 | 0 | 18.6-129 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: Nitrobenzene-d5 | 57.1 | 0 | 36.9-103 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: 2-Fluorobiphenyl | 56.8 | 0 | 38.1-99.9 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| Surr: 4-Terphenyl-d14 | 80.7 | 0 | 48-155 | | %Rec | 1 | 6/28/2022 4:39:30 PM | 68135 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.76 | 0.11 | 1.0 | J | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/22/2022 2:28:00 AM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 31.6-100 | | %Rec | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Surr: 2-Fluorobiphenyl | 61.5 | 0 | 26.7-90.1 | | %Rec | 1 | 6/22/2022 2:28:00 AM | 68135 |
| Surr: 4-Terphenyl-d14 | 92.5 | 0 | 72.3-147 | | %Rec | 1 | 6/22/2022 2:28:00 AM | 68135 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.28 | 0.0016 | 0.0030 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Vanadium | 0.0092 | 0.0035 | 0.050 | J | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/16/2022 5:24:03 PM | 68127 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 11:57:16 AM | 68127 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 11:57:16 AM | 68127 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 11:57:16 AM | 68127 |
| Selenium | 0.0011 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 11:57:16 AM | 68127 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:22:55 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/9/2022 9:50:00 AM

Lab ID: 2206602-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.26 | 0.0011 | 0.0020 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Vanadium | 0.0096 | 0.0017 | 0.050 | J | mg/L | 1 | 6/14/2022 6:26:42 PM | A88751 |
| Zinc | 0.0096 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 7:18:49 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00070 | 0.00044 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:20:03 PM | C88688 |
| Arsenic | 0.00088 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:20:03 PM | C88688 |
| Lead | 0.000064 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/13/2022 3:02:18 PM | C88688 |
| Selenium | 0.00055 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/13/2022 1:20:03 PM | C88688 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/14/2022 3:29:24 PM | 68089 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Surr: 4-Bromofluorobenzene | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:49:48 PM | R88822 |
| Surr: Toluene-d8 | 90.0 | 0 | 70-130 | | %Rec | 1 | 6/16/2022 8:49:48 PM | R88822 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206602

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206602-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/14/2022 5:06:51 PM | 68078 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

June 23, 2022

Revised Report

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1504393

Samples Received: 06/14/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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Tc: Table of Contents 2

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Cn: Case Narrative 4

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2206602-004F OW-52 L1504393-04 8

2206602-005F OW-29 L1504393-05 9

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1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2206602-001F EB-6-9-22 L1504393-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:31 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 09:00
06/14/22 08:45

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2206602-002F BW-5C L1504393-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:32 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 09:30
06/14/22 08:45

2206602-003F OW-50 L1504393-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:33 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 10:30
06/14/22 08:45

2206602-004F OW-52 L1504393-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:34 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 10:50
06/14/22 08:45

2206602-005F OW-29 L1504393-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:35 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 11:15
06/14/22 08:45

2206602-006F OW-13 L1504393-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:36 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 11:35
06/14/22 08:45

2206602-008F DU-6-9-22 L1504393-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:37 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 00:00
06/14/22 08:45

2206602-009F BW-58 L1504393-08 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1882743 | 1 | 06/22/22 07:02 | 06/22/22 15:38 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/09/22 09:50
06/14/22 08:45

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

Report Revision History

Level II Report - Version 1: 06/23/22 08:40

Project Narrative

Reprint correct sample IDS



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:31 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:32 | WG1882743 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|-----------|
| Cyanide | 2.18 | J | 1.80 | 5.00 | 1 | 06/22/2022 15:33 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:34 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 5.34 | | 1.80 | 5.00 | 1 | 06/22/2022 15:35 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:36 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:37 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 06/22/2022 15:38 | WG1882743 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3806171-1 06/22/22 15:06

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| Cyanide | U | | 1.80 | 5.00 |

L1502913-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1502913-02 06/22/22 15:11 • (DUP) R3806171-3 06/22/22 15:12

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | 2.51 | 4.19 | 1 | 50.1 | J P1 | 20 |

L1503767-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1503767-03 06/22/22 15:24 • (DUP) R3806171-8 06/22/22 15:25

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3806171-2 06/22/22 15:07

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Cyanide | 100 | 104 | 104 | 87.1-120 | |

L1503570-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503570-03 06/22/22 15:15 • (MS) R3806171-4 06/22/22 15:18 • (MSD) R3806171-5 06/22/22 15:19

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Cyanide | 100 | U | 99.1 | 98.5 | 99.1 | 98.5 | 1 | 90.0-110 | | | 0.607 | 20 |

L1503767-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503767-02 06/22/22 15:21 • (MS) R3806171-6 06/22/22 15:22 • (MSD) R3806171-7 06/22/22 15:23

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Cyanide | 100 | U | 99.1 | 101 | 99.1 | 101 | 1 | 90.0-110 | | | 1.90 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

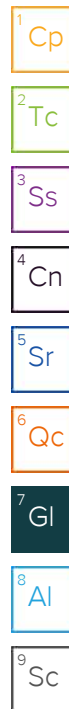
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |



Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

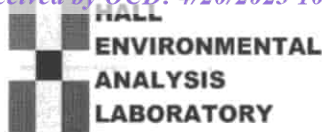
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 2218 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

D091

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|----------------------|--------------|-----------------------------|
| 1 | 2206602-001F | EB-6-9-22 | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 9:00:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2206602-002F | BW-5C | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2206602-003F | OW-50 | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 10:30:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2206602-004F | OW-52 | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 10:50:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2206602-005F | OW-29 | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 11:15:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2206602-006F | OW-13 | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 11:35:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2206602-008F | DUP-6-9-22 | 500AMBHDP
E.NAOH | Groundw
ater | | 1 | Total Cyanide J and MDL -07 |
| 8 | 2206602-009F | BW-5B | 500AMBHDP
E.NAOH | Groundw
ater | 6/9/2022 9:50:00 AM | 1 | Total Cyanide J and MDL -08 |

5755 8093 3113
 Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N
 DRAFT
 5.9 +0 = 5.9

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you!

| | | | | | |
|-----------------------------|------------------------|----------------------|-------------------------|----------------------|-------------------|
| Relinquished By: <i>cmc</i> | Date: 6/10/2022 | Time: 1:34 PM | Received By: <i>Pat</i> | Date: 6/14/22 | Time: 0845 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐

| | |
|--|---|
| REPORT TRANSMITTAL DESIRE | |
| ☐ HARDCOPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| FOR LAB USE ONLY | |
| Temp of samples _____ °C | Attempt to Cool? _____ |
| Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68127 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153628 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68127 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153629 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 93.1 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Chromium | 0.0067 | 0.0060 | 0.006000 | 0 | 111 | 50 | 150 | | | |
| Cobalt | 0.0080 | 0.0060 | 0.006000 | 0 | 133 | 50 | 150 | | | |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.4 | 50 | 150 | | | J |
| Silver | 0.0054 | 0.0050 | 0.005000 | 0 | 108 | 50 | 150 | | | |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 96.8 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 106 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68127 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68127 | RunNo: 88823 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/16/2022 | SeqNo: 3153630 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.6 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2206602-009DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BW-5B | | Batch ID: 68127 | | RunNo: 88823 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/16/2022 | | SeqNo: 3153659 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.78 | 0.0030 | 0.5000 | 0.2762 | 102 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.3 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.3 | 70 | 130 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.8 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0.009227 | 102 | 70 | 130 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2206602-009DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BW-5B | | Batch ID: 68127 | | RunNo: 88823 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/16/2022 | | SeqNo: 3153660 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.79 | 0.0030 | 0.5000 | 0.2762 | 103 | 70 | 130 | 0.552 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | 0.532 | 20 | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.1 | 70 | 130 | 1.81 | 20 | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 101 | 70 | 130 | 2.27 | 20 | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | 2.01 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 70 | 130 | 1.61 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | 1.35 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0.009227 | 103 | 70 | 130 | 1.12 | 20 | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 106 | 70 | 130 | 2.63 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A88751 | RunNo: 88751 | | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | SeqNo: 3151181 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A88751 | RunNo: 88751 | | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | SeqNo: 3151182 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0020 | 0.002000 | 0 | 70.7 | 50 | 150 | | | J |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.6 | 50 | 150 | | | J |
| Chromium | 0.0057 | 0.0060 | 0.006000 | 0 | 95.1 | 50 | 150 | | | J |
| Cobalt | 0.0073 | 0.0060 | 0.006000 | 0 | 122 | 50 | 150 | | | |
| Nickel | 0.0047 | 0.010 | 0.005000 | 0 | 94.5 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 107 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 100 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A88751 | RunNo: 88751 | | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | SeqNo: 3151183 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152486 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152487 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0023 | 0.0020 | 0.002000 | 0 | 114 | 50 | 150 | | | |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 92.5 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 127 | 50 | 150 | | | |
| Chromium | 0.0064 | 0.0060 | 0.006000 | 0 | 106 | 50 | 150 | | | |
| Cobalt | 0.0071 | 0.0060 | 0.006000 | 0 | 118 | 50 | 150 | | | |
| Nickel | 0.0032 | 0.010 | 0.005000 | 0 | 64.9 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 94.6 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 112 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152488 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.9 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2206602-001EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-6-9-22 | | Batch ID: B88784 | | RunNo: 88784 | | | | | | |
| Prep Date: | | Analysis Date: 6/15/2022 | | SeqNo: 3152493 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.5 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.5 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 110 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006532 | 99.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2206602-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-6-9-22 | | Batch ID: B88784 | | RunNo: 88784 | | | | | | |
| Prep Date: | | Analysis Date: 6/15/2022 | | SeqNo: 3152494 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | 0 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0 | 20 | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 0 | 20 | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 70 | 130 | 0 | 20 | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.8 | 70 | 130 | 0 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.4 | 70 | 130 | 0 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | 0 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | 0 | 20 | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0.006532 | 97.1 | 70 | 130 | 0 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-68127 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68127 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155291 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-68127 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68127 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155292 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00096 | 0.0010 | 0.001000 | 0 | 96.0 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.00084 | 0.0010 | 0.001000 | 0 | 84.1 | 50 | 150 | | | J |

| | | | | | | | | | | | |
|-------------------------------|--|---------------------------------|---------|------------------------------------|-----------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCS-68127 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | | Batch ID: 68127 | | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155293 | | Units: mg/L | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | | 0.024 | 0.0010 | 0.02500 | 0 | 96.6 | 85 | 115 | | | |
| Arsenic | | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | | 0.012 | 0.00050 | 0.01250 | 0 | 97.5 | 85 | 115 | | | |
| Selenium | | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2206602-005DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-29 | | Batch ID: 68127 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155361 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |
| Lead | 0.0098 | 0.00050 | 0.01250 | 0 | 78.5 | 70 | 130 | | | |
| Selenium | 0.031 | 0.0010 | 0.02500 | 0 | 123 | 70 | 130 | | | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2206602-005DMSLL SampType: MS TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: OW-29 | | Batch ID: 68127 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3156053 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.029 | 0.0050 | 0.02500 | 0 | 117 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: C88688 | | RunNo: 88688 | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | | SeqNo: 3148259 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: C88688 | | RunNo: 88688 | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | | SeqNo: 3148260 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00053 | 0.00050 | 0.0005000 | 0 | 105 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: C88688 | | RunNo: 88688 | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | | SeqNo: 3148261 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.3 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.8 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206602-001EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-6-9-22 | Batch ID: C88688 | | RunNo: 88688 | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | | SeqNo: 3148297 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 91.4 | 70 | 130 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206602-001EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-6-9-22 | Batch ID: C88688 | | RunNo: 88688 | | | | | | | |
| Prep Date: | Analysis Date: 6/13/2022 | | SeqNo: 3148298 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 70 | 130 | 2.53 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2206602-001EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB-6-9-22 | Batch ID: C88688 | RunNo: 88688 |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148298 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.023 | 0.0010 0.02500 0 91.6 70 130 0.191 20 |
| Selenium | 0.024 | 0.0010 0.02500 0 94.0 70 130 3.63 20 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2206602-002EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BW-5C | Batch ID: C88688 | RunNo: 88688 |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148300 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.028 | 0.0010 0.02500 0.0005467 112 70 130 |
| Selenium | 0.026 | 0.0010 0.02500 0.0003976 101 70 130 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2206602-001EMS | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB-6-9-22 | Batch ID: C88688 | RunNo: 88688 |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148336 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.012 | 0.00050 0.01250 0 94.5 70 130 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2206602-001EMSD | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: EB-6-9-22 | Batch ID: C88688 | RunNo: 88688 |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148337 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.012 | 0.00050 0.01250 0 94.1 70 130 0.390 20 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2206602-002EMS | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BW-5C | Batch ID: C88688 | RunNo: 88688 |
| Prep Date: | Analysis Date: 6/13/2022 | SeqNo: 3148339 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.12 | 0.0050 0.1250 0 99.2 70 130 |
| Lead | 0.056 | 0.0025 0.06250 0 89.2 70 130 |

| | | |
|-----------------------|---------------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: B88918 | RunNo: 88918 |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157492 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157492 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157493 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Lead | 0.00057 | 0.00050 | 0.0005000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157494 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|--------|----------|------|
| Sample ID: LCS D | SampType: LCS D | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSS02 | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157495 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | 1.71 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | 0.0894 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | 2.56 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | 1.84 | 20 | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157510 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00092 | 0.0010 | 0.001000 | 0 | 92.2 | 50 | 150 | | | J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-68089 | | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: PBW | | Batch ID: 68089 | | RunNo: 88725 | | | | | | |
| Prep Date: 6/14/2022 | | Analysis Date: 6/14/2022 | | SeqNo: 3150007 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|------------------------|---------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCSLL-68089 | | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | | Batch ID: 68089 | | RunNo: 88725 | | | | | | |
| Prep Date: 6/14/2022 | | Analysis Date: 6/14/2022 | | SeqNo: 3150008 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00019 | 0.00020 | 0.0001500 | 0 | 129 | 50 | 150 | | | J |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCS-68089 | | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | | Batch ID: 68089 | | RunNo: 88725 | | | | | | |
| Prep Date: 6/14/2022 | | Analysis Date: 6/14/2022 | | SeqNo: 3150009 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 107 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2206602-009DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BW-5B | | Batch ID: 68089 | | RunNo: 88725 | | | | | | |
| Prep Date: 6/14/2022 | | Analysis Date: 6/14/2022 | | SeqNo: 3150057 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0050 | 0.00020 | 0.005000 | 0 | 99.2 | 75 | 125 | | | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|-------|----------|------|
| Sample ID: 2206602-009DMSD SampType: MSD TestCode: EPA Method 245.1: Mercury | | | | | | | | | | |
| Client ID: BW-5B | | Batch ID: 68089 | | | RunNo: 88725 | | | | | |
| Prep Date: 6/14/2022 | | Analysis Date: 6/14/2022 | | | SeqNo: 3150058 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0049 | 0.00020 | 0.005000 | 0 | 98.9 | 75 | 125 | 0.329 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB-68078 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150157 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| Sample ID: MB-68078 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150158 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| Sample ID: LCS-68078 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150159 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 119 | 70 | 130 | | | |

| Sample ID: LCSD-68078 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68078 | RunNo: 88730 | | | | | | | | |
| Prep Date: 6/14/2022 | Analysis Date: 6/14/2022 | SeqNo: 3150161 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 117 | 70 | 130 | 1.67 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68123 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68123 | | RunNo: 88890 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/20/2022 | | SeqNo: 3156746 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.021 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.030 | | 0.03750 | | 80.2 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68123 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68123 | | RunNo: 88890 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/20/2022 | | SeqNo: 3156747 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.083 | 0.064 | 0.1875 | 0 | 44.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.014 | | 0.01875 | | 74.4 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68123 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68123 | | RunNo: 88890 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/20/2022 | | SeqNo: 3156748 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.096 | 0.064 | 0.1875 | 0 | 51.4 | 31.7 | 75.4 | 14.7 | 20 | |
| Surr: DNOP | 0.016 | | 0.01875 | | 84.7 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs2 | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: C88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/14/2022 | | SeqNo: 3150195 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 92.8 | 80 | 120 | | | |
| Surr: BFB | 39 | | 20.00 | | 194 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb2 | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: C88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | | SeqNo: 3150196 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 93.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206602-001ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-6-9-22 | Batch ID: C88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | | SeqNo: 3150198 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.43 | 0.050 | 0.5000 | 0 | 86.9 | 70 | 130 | | | |
| Surr: BFB | 38 | | 20.00 | | 191 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206602-001amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-6-9-22 | Batch ID: C88732 | | RunNo: 88732 | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | | SeqNo: 3150199 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 91.2 | 70 | 130 | 4.90 | 20 | |
| Surr: BFB | 40 | | 20.00 | | 201 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153564 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.9 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153586 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R88822 | | RunNo: 88822 | | | | | | | |
| Prep Date: | Analysis Date: 6/16/2022 | | SeqNo: 3153586 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A88912 | | RunNo: 88912 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157839 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A88912 | | RunNo: 88912 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157862 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: A88962 | | RunNo: 88962 | | | | | | | |
| Prep Date: | Analysis Date: 6/22/2022 | | SeqNo: 3159131 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 1,2-Dichloroethane-d4 | 9.1 | | 10.00 | | 90.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: A88962 | | RunNo: 88962 | | | | | | | |
| Prep Date: | Analysis Date: 6/22/2022 | | SeqNo: 3159170 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 97.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68135 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68135 | RunNo: 89063 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | SeqNo: 3163448 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.0 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 94 | | 200.0 | | 46.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 64.4 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 75.7 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 94.8 | 48 | 155 | | | |

| Sample ID: lcs-68135 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68135 | RunNo: 89063 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | SeqNo: 3163449 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-68135 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68135 | | RunNo: 89063 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | SeqNo: 3163449 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 73 | 10 | 100.0 | 0 | 72.6 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 65 | 5.0 | 100.0 | 0 | 64.7 | 15 | 89.8 | | | |
| Phenol | 95 | 20 | 200.0 | 0 | 47.3 | 17 | 61.1 | | | |
| Pyrene | 100 | 10 | 100.0 | 0 | 103 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 56.5 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 44.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 73.2 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.5 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 71 | | 100.0 | | 71.0 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 105 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: Icsd-68135 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68135 | | RunNo: 89063 | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/22/2022 | | SeqNo: 3163450 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 76 | 10 | 100.0 | 0 | 76.2 | 21.3 | 104 | 4.75 | 45.3 | |
| 1,4-Dichlorobenzene | 68 | 5.0 | 100.0 | 0 | 68.3 | 15 | 89.8 | 5.40 | 39.6 | |
| Phenol | 97 | 20 | 200.0 | 0 | 48.4 | 17 | 61.1 | 2.29 | 42.5 | |
| Pyrene | 100 | 10 | 100.0 | 0 | 102 | 61 | 123 | 0.461 | 11.8 | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 57.6 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 45.2 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 73.9 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 75.2 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 74 | | 100.0 | | 73.6 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68135 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68135 | RunNo: 88923 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157888 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 81 | | 100.0 | | 81.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.5 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 120 | 72.3 | 147 | | | |

| Sample ID: lcs-68135 lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68135 | RunNo: 88923 | | | | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157889 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.82 | 0.10 | 2.000 | 0 | 41.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 84.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 105 | 51 | 147 | | | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 80 | | 100.0 | | 80.4 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206602

08-Jul-22

Client: Marathon

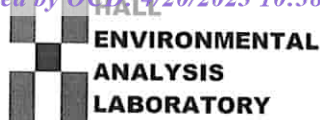
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-68135 lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68135 | | RunNo: 88923 | | | | | | |
| Prep Date: 6/15/2022 | | Analysis Date: 6/21/2022 | | SeqNo: 3157889 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 88 | | 200.0 | | 44.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 73 | | 100.0 | | 73.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.7 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: Icsd-68135 lf | SampType: LCSD | | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | Batch ID: 68135 | | | | RunNo: 88923 | | | | | |
| Prep Date: 6/15/2022 | Analysis Date: 6/21/2022 | | | | SeqNo: 3157890 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | 2.47 | 30.1 | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21.3 | 79.9 | 3.08 | 25.6 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 22.2 | 80.3 | 1.55 | 25 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 20.6 | 80.1 | 1.55 | 25 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 33.3 | 86 | 2.63 | 26.4 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 38.2 | 93.9 | 5.13 | 27.9 | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 41.1 | 95.6 | 5.85 | 25.6 | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 104 | 52.9 | 123 | 4.93 | 22.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 51 | 113 | 6.90 | 20 | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 111 | 51 | 147 | 5.56 | 24.1 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | 3.64 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 44.4 | 136 | 3.43 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 31.4 | 165 | 0 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 78.6 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 89 | | 200.0 | | 44.5 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.2 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2206602

RcptNo: 1

Received By: Cheyenne Cason 6/10/2022 7:20:00 AM

Completed By: Sean Livingston 6/10/2022 9:38:51 AM

Reviewed By: KPA 6.13.22

Chad

Sean Livingston

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

16

(≤2 or ≥12 unless noted)

Adjusted?

yes

Checked by:

jn 6/13/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

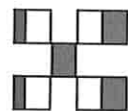
Client Instructions:

16. Additional remarks: 0.4ml of HNO₃ was added to sample 005F for pH<2.

17. Cooler Information 3.0ml of NaOH was added to samples 001F, 003F, 004F for

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.5 | Good | | | | |
| 2 | 1.8 | Good | | | | |
| 3 | 1.2 | Good | | | | |
| 4 | 5.8 | Good | | | | |

pH < 7.2. jn 6/13/22.
jn 6/13/22



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| | | | | | | |
|---|-------|---|--------------|---|-------------------|----------|
| Client: Marathon Gallup Refinery | | X Standard Rush | | Project Name: | | |
| Mailing Address: 92 Giant Crossing Road | | 2022 GW Sampling 2nd Quarter | | Project #: 697-080-001 | | |
| Phone #: 808-640-1823 | | Project Manager: | | Lesli Alexander/Mackensie Swift | | |
| A/QC Package: ☐ Az Compliance ☐ Level 4 (Full Validation) | | Sampler: | | | | |
| Standard ☐ NELAC ☐ Other | | On Ice: ☒ Yes ☐ No | | | | |
| EDD (Type) | | # of Coolers: 4 | | Cooler Temp (including CF): See Remarks | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
| 6/9 | 9:00 | | ED-6-9-22 | 14 | | 2206002 |
| 6/9 | 9:30 | | BW-5C | 14 | | 001 |
| 6/9 | 10:30 | | OW-5D | 14 | | 002 |
| 6/9 | 10:30 | | OW-52 | 14 | | 003 |
| 6/9 | 11:15 | | OW-29 | 14 | | 004 |
| 6/9 | 11:35 | | OW-13 | 14 | | 005 |
| 6/9 | 11:35 | | FB-6-9-22 | 14 | | 006 |
| 6/9 | — | | Dup. 6-9-22 | 14 | | 007 |
| 6/9 | 9:50 | | BW-5B | 14 | | 008 |
| | | | Trip Blank | | | 009 |
| | | | | | | 010 |
| Date | Time | Relinquished by: | Hilaris Trgo | Received by: | Via: | Date |
| 6/9 | 12:00 | | | | | Time |
| Date: | Time: | Relinquished by: | | Received by: | Via: | Date |
| | | | | | | Time |

OW-50 and OW-52 NEED TO

be put in NaOH Bottles.

0.5-0=0.5 1.2-0=1.2

1.8-0=1.8 5.8-0=5.8

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

No sample provided for FB-8270

5/6/13/22



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 08, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Qtr

OrderNo.: 2206781

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/15/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206781
Date: 7/8/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Qtr

Analytical notes Regarding EPA Method 8270:

Samples PW-3 and East LDU had poor surrogate recoveries due to the emulsive nature of the sample.

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-14-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:00:00 AM

Lab ID: 2206781-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 12:19:38 PM | G88994 |
| Surr: BFB | 92.0 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 12:19:38 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Chloromethane | 0.67 | 0.41 | 3.0 | J | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Methylene Chloride | 0.92 | 0.50 | 3.0 | J | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 94.2 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Surr: Dibromofluoromethane | 92.6 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:07:11 PM | A88912 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:07:11 PM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-14-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:00:00 AM

Lab ID: 2206781-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/20/2022 9:46:48 PM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-14-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:00:00 AM

Lab ID: 2206781-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|--------------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | Analyst: ED | | | |
| Diesel Range Organics (DRO) | 0.035 | 0.016 | 0.064 | J | mg/L | 1 | 6/28/2022 10:31:48 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/28/2022 10:31:48 PM | 68185 |
| Surr: DNOP | 86.7 | 0 | 42.2-138 | | %Rec | 1 | 6/28/2022 10:31:48 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | Analyst: DAM | | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: 2-Fluorophenol | 53.9 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: Phenol-d5 | 41.0 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 69.2 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: Nitrobenzene-d5 | 67.8 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 69.0 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 84.9 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 1:31:10 PM | 68202 |
| EPA METHOD 8270SIM | | | | | Analyst: DAM | | | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 12:42:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206781**Date Reported: **7/8/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** EB-6-14-22**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/14/2022 8:00:00 AM**Lab ID:** 2206781-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 79.6 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 77.0 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 12:42:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 108 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 12:42:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-14-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:00:00 AM

Lab ID: 2206781-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:32:43 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 1:57:48 PM | 68172 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 1:57:48 PM | 68172 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 1:57:48 PM | 68172 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 1:57:48 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 1:40:17 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-14-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:00:00 AM

Lab ID: 2206781-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| Zinc | 0.0058 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 7:23:30 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:09:58 AM | B88918 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:09:58 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:09:58 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:09:58 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 1:42:24 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:30:00 AM

Lab ID: 2206781-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 12:43:22 PM | G88994 |
| Surr: BFB | 96.4 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 12:43:22 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Methylene Chloride | 2.1 | 0.50 | 3.0 | J | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 93.6 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Surr: Dibromofluoromethane | 94.6 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:34:11 PM | A88912 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 8:34:11 PM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:30:00 AM

Lab ID: 2206781-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 3:31:26 PM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:30:00 AM

Lab ID: 2206781-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.036 | 0.016 | 0.064 | J | mg/L | 1 | 6/28/2022 10:55:37 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/28/2022 10:55:37 PM | 68185 |
| Surr: DNOP | 92.2 | 0 | 42.2-138 | | %Rec | 1 | 6/28/2022 10:55:37 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: 2-Fluorophenol | 24.0 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: Phenol-d5 | 18.0 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 31.7 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: Nitrobenzene-d5 | 29.8 | 0 | 36.9-103 | S | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 30.2 | 0 | 38.1-99.9 | S | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 49.4 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 2:13:11 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 1:26:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206781**Date Reported: **7/8/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** PW-3**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/14/2022 8:30:00 AM**Lab ID:** 2206781-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 36.8 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 36.3 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 1:26:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 73.5 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 1:26:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:30:00 AM

Lab ID: 2206781-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.012 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Cobalt | 0.0036 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| Zinc | 0.016 | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:34:19 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 2:00:14 PM | 68172 |
| Arsenic | 0.0040 | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 6:25:51 PM | 68172 |
| Lead | 0.00021 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 2:00:14 PM | 68172 |
| Selenium | 0.0013 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 6:25:51 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 1:44:31 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 8:30:00 AM

Lab ID: 2206781-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.011 | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Silver | 0.0058 | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 5:42:05 PM | B88897 |
| Vanadium | 0.0019 | 0.0017 | 0.050 | J | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 9:30:07 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:18:04 AM | B88918 |
| Arsenic | 0.0036 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:18:04 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:18:04 AM | B88918 |
| Selenium | 0.0011 | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:18:04 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 1:46:39 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 2:18:14 PM | G88994 |
| Surr: BFB | 95.8 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 2:18:14 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Methylene Chloride | 1.6 | 0.50 | 3.0 | J | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 96.3 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Surr: Dibromofluoromethane | 97.9 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 2:52:09 AM | A88912 |
| Surr: Toluene-d8 | 99.9 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 2:52:09 AM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 4:01:40 PM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 6/28/2022 11:19:24 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/28/2022 11:19:24 PM | 68185 |
| Surr: DNOP | 66.8 | 0 | 42.2-138 | | %Rec | 1 | 6/28/2022 11:19:24 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: 2-Fluorophenol | 49.4 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: Phenol-d5 | 37.0 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 70.3 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: Nitrobenzene-d5 | 59.3 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 62.8 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 86.2 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 2:56:09 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 2:10:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.6 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 69.9 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 2:10:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 109 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 2:10:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.014 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Cobalt | 0.0036 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:35:57 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 2:02:40 PM | 68172 |
| Arsenic | 0.0029 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/22/2022 12:42:25 PM | 68172 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 2:02:40 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/22/2022 12:42:25 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:41:05 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:00:00 AM

Lab ID: 2206781-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.013 | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Silver | 0.0050 | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 5:44:29 PM | B88897 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| Zinc | 0.0096 | 0.0032 | 0.010 | J | mg/L | 1 | 6/15/2022 9:35:04 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:23:27 AM | B88918 |
| Arsenic | 0.0029 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:23:27 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:23:27 AM | B88918 |
| Selenium | 0.00070 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/21/2022 11:23:27 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:43:13 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.41 | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 2:42:06 PM | G88994 |
| Surr: BFB | 213 | 0 | 70-130 | S | %Rec | 1 | 6/23/2022 2:42:06 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 25 | 0.23 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Toluene | 1.7 | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Ethylbenzene | 20 | 0.21 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Methyl tert-butyl ether (MTBE) | 1.5 | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,2,4-Trimethylbenzene | 10 | 0.12 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,3,5-Trimethylbenzene | 8.4 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Chloroform | 0.24 | 0.13 | 1.0 | J | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Chloromethane | 0.94 | 0.41 | 3.0 | J | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Isopropylbenzene | 4.3 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 4-Isopropyltoluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Methylene Chloride | 27 | 0.50 | 3.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| n-Butylbenzene | 0.87 | 0.25 | 3.0 | J | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| n-Propylbenzene | 4.5 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| sec-Butylbenzene | 2.2 | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Vinyl chloride | 0.52 | 0.32 | 1.0 | J | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Xylenes, Total | 14 | 0.37 | 1.5 | | µg/L | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Surr: 1,2-Dichloroethane-d4 | 99.4 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Surr: 4-Bromofluorobenzene | 99.9 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Surr: Dibromofluoromethane | 95.7 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 12:03:26 PM | A88962 |
| Surr: Toluene-d8 | 96.1 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 12:03:26 PM | A88962 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/20/2022 11:17:55 PM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 3.6 | 0.016 | 0.064 | | mg/L | 1 | 6/28/2022 11:43:07 PM | 68185 |
| Motor Oil Range Organics (MRO) | 0.061 | 0.052 | 0.080 | J | mg/L | 1 | 6/28/2022 11:43:07 PM | 68185 |
| Surr: DNOP | 83.4 | 0 | 42.2-138 | | %Rec | 1 | 6/28/2022 11:43:07 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: 2-Fluorophenol | 1.79 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: Phenol-d5 | 10.9 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 10.7 | 0 | 18.6-129 | S | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: Nitrobenzene-d5 | 33.5 | 0 | 36.9-103 | S | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 40.4 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 55.1 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 3:38:23 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.40 | 0.11 | 1.0 | J | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| 1-Methylnaphthalene | 0.48 | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Acenaphthene | 0.64 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Fluorene | 1.2 | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Phenanthrene | 2.2 | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Anthracene | 0.46 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Fluoranthene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 2:54:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 40.0 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 37.5 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 2:54:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 56.9 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 2:54:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Beryllium | 0.0045 | 0.00088 | 0.0020 | * | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Chromium | 5.3 | 0.020 | 0.060 | * | mg/L | 10 | 6/23/2022 4:29:11 PM | 68172 |
| Cobalt | 0.021 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Nickel | 3.3 | 0.053 | 0.10 | * | mg/L | 10 | 6/23/2022 4:29:11 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Vanadium | 0.12 | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:37:34 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/20/2022 6:08:42 PM | 68172 |
| Arsenic | 0.0013 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 6:08:42 PM | 68172 |
| Lead | 0.00048 | 0.00031 | 0.0025 | J | mg/L | 5 | 6/20/2022 6:08:42 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:08:42 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:45:21 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 9:40:00 AM

Lab ID: 2206781-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.053 | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Beryllium | 0.0045 | 0.00088 | 0.0020 | * | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Chromium | 2.9 | 0.0098 | 0.030 | * | mg/L | 5 | 6/15/2022 9:51:18 PM | B88784 |
| Cobalt | 0.014 | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Nickel | 3.3 | 0.016 | 0.050 | * | mg/L | 5 | 6/15/2022 9:51:18 PM | B88784 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Vanadium | 0.018 | 0.0017 | 0.050 | J | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| Zinc | 0.12 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 9:49:01 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:26:08 AM | B88918 |
| Arsenic | 0.00098 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/21/2022 1:05:42 PM | B88918 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/21/2022 1:05:42 PM | B88918 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/21/2022 1:05:42 PM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:47:31 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.050 | 0.0090 | 0.050 | J | mg/L | 1 | 6/23/2022 3:05:56 PM | G88994 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 3:05:56 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 0.43 | 0.23 | 1.0 | J | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Methyl tert-butyl ether (MTBE) | 2.2 | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,3,5-Trimethylbenzene | 0.18 | 0.18 | 1.0 | J | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Acetone | 8.5 | 2.5 | 10 | J | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Methylene Chloride | 15 | 0.50 | 3.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 93.7 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Surr: Dibromofluoromethane | 93.5 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 3:46:05 AM | A88912 |
| Surr: Toluene-d8 | 96.5 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 3:46:05 AM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/20/2022 11:48:13 PM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|--------------|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | Analyst: ED | | |
| Diesel Range Organics (DRO) | 2.3 | 0.016 | 0.064 | | mg/L | 1 | 6/29/2022 12:06:53 AM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 12:06:53 AM | 68185 |
| Surr: DNOP | 92.8 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 12:06:53 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | Analyst: DAM | | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: 2-Fluorophenol | 56.8 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: Phenol-d5 | 0 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 71.4 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: Nitrobenzene-d5 | 65.5 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 70.3 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 85.4 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 4:21:41 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | Analyst: DAM | | |
| 1,4-Dioxane | 9.8 | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 3:38:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206781**Date Reported: **7/8/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** West LDU**Project:** 2022 GW Sampling 2nd Qtr**Collection Date:** 6/14/2022 10:15:00 AM**Lab ID:** 2206781-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 77.8 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 64.9 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 3:38:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 81.7 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 3:38:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.067 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Chromium | 1.0 | 0.0098 | 0.030 | * | mg/L | 5 | 6/21/2022 6:10:11 PM | 68172 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Nickel | 1.1 | 0.027 | 0.050 | * | mg/L | 5 | 6/21/2022 6:10:11 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Vanadium | 0.025 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:38:59 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/20/2022 6:16:02 PM | 68172 |
| Arsenic | 0.00097 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 6:16:02 PM | 68172 |
| Lead | 0.0017 | 0.00031 | 0.0025 | J | mg/L | 5 | 6/20/2022 6:16:02 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:16:02 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:49:40 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.039 | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Chromium | 0.51 | 0.0020 | 0.0060 | * | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Cobalt | 0.0039 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Nickel | 0.96 | 0.0033 | 0.010 | * | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| Zinc | 0.064 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 9:53:21 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:42:18 AM | B88918 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 6/21/2022 1:08:23 PM | B88918 |
| Lead | 0.00043 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/21/2022 11:42:18 AM | B88918 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/21/2022 1:08:23 PM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:51:57 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022 10:15:00 AM

Lab ID: 2206781-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Toluene | 0.32 | 0.20 | 1.0 | J | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Acetone | 3.5 | 2.5 | 10 | J | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Methylene Chloride | 0.72 | 0.50 | 3.0 | J | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 92.0 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Surr: Dibromofluoromethane | 96.0 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:13:02 AM | A88912 |
| Surr: Toluene-d8 | 97.7 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:13:02 AM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.52 | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 3:29:40 PM | G88994 |
| Surr: BFB | 230 | 0 | 70-130 | S | %Rec | 1 | 6/23/2022 3:29:40 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 21 | 0.23 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Toluene | 1.7 | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Ethylbenzene | 19 | 0.21 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Methyl tert-butyl ether (MTBE) | 1.5 | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,2,4-Trimethylbenzene | 9.6 | 0.12 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,3,5-Trimethylbenzene | 8.2 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Isopropylbenzene | 4.2 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 4-Isopropyltoluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Methylene Chloride | 220 | 5.0 | 30 | | µg/L | 10 | 6/22/2022 12:30:29 PM | A88962 |
| n-Butylbenzene | 0.81 | 0.25 | 3.0 | J | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| n-Propylbenzene | 4.3 | 0.18 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| sec-Butylbenzene | 2.0 | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Xylenes, Total | 14 | 0.37 | 1.5 | | µg/L | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Surr: 4-Bromofluorobenzene | 97.9 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Surr: Dibromofluoromethane | 92.7 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:39:57 AM | A88912 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 6/22/2022 4:39:57 AM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 12:18:30 AM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 3.5 | 0.16 | 0.64 | | mg/L | 10 | 6/30/2022 7:40:30 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 6/30/2022 7:40:30 PM | 68185 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 6/30/2022 7:40:30 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: 2-Fluorophenol | 44.6 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: Phenol-d5 | 32.4 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 70.0 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: Nitrobenzene-d5 | 52.9 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 55.9 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 72.1 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 5:04:33 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.4 | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| 1-Methylnaphthalene | 0.34 | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Acenaphthene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Fluorene | 1.3 | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Phenanthrene | 2.5 | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Anthracene | 0.52 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Fluoranthene | 0.76 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Pyrene | 0.34 | 0.32 | 1.0 | J | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 4:22:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.1 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 49.8 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 4:22:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 65.7 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 4:22:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:43:06 PM | 68172 |
| Beryllium | 0.0046 | 0.00088 | 0.0020 | * | mg/L | 1 | 6/20/2022 2:43:06 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:43:06 PM | 68172 |
| Chromium | 4.7 | 0.0098 | 0.030 | * | mg/L | 5 | 6/21/2022 6:24:11 PM | 68172 |
| Cobalt | 0.024 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:43:06 PM | 68172 |
| Nickel | 3.4 | 0.027 | 0.050 | * | mg/L | 5 | 6/21/2022 6:24:11 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/21/2022 5:24:00 PM | 68172 |
| Vanadium | 0.13 | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:43:06 PM | 68172 |
| Zinc | 0.16 | 0.0039 | 0.010 | | mg/L | 1 | 6/21/2022 5:24:00 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 6/20/2022 6:18:30 PM | 68172 |
| Arsenic | ND | 0.0025 | 0.020 | | mg/L | 20 | 6/20/2022 6:18:30 PM | 68172 |
| Lead | ND | 0.0012 | 0.010 | | mg/L | 20 | 6/20/2022 6:18:30 PM | 68172 |
| Selenium | ND | 0.0074 | 0.020 | | mg/L | 20 | 6/20/2022 6:18:30 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:54:08 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-9-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/14/2022

Lab ID: 2206781-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.052 | 0.0011 | 0.0020 | | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Beryllium | 0.0044 | 0.00088 | 0.0020 | * | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Chromium | 2.8 | 0.0098 | 0.030 | * | mg/L | 5 | 6/15/2022 9:59:56 PM | B88784 |
| Cobalt | 0.014 | 0.0024 | 0.0060 | | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Nickel | 3.2 | 0.016 | 0.050 | * | mg/L | 5 | 6/15/2022 9:59:56 PM | B88784 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Vanadium | 0.018 | 0.0017 | 0.050 | J | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| Zinc | 0.12 | 0.0032 | 0.010 | | mg/L | 1 | 6/15/2022 9:57:41 PM | B88784 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/21/2022 1:19:09 PM | B88918 |
| Arsenic | 0.00081 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/21/2022 1:19:09 PM | B88918 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/21/2022 1:19:09 PM | B88918 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 6/21/2022 1:19:09 PM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/17/2022 2:56:15 PM | 68186 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206781-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Chloromethane | 0.76 | 0.41 | 3.0 | J | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Methylene Chloride | 0.52 | 0.50 | 3.0 | J | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Surr: 1,2-Dichloroethane-d4 | 92.8 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Surr: Dibromofluoromethane | 94.9 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 9:01:10 PM | A88912 |
| Surr: Toluene-d8 | 99.8 | 0 | 70-130 | | %Rec | 1 | 6/21/2022 9:01:10 PM | A88912 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206781

Date Reported: 7/8/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206781-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/21/2022 12:48:48 AM | 68189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

June 25, 2022

Hall Environmental Analysis Laboratory

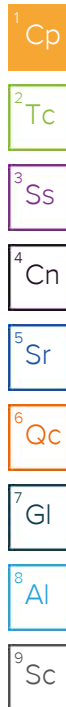
Sample Delivery Group: L1505741

Samples Received: 06/16/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div>¹Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div>²Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div>³Ss</div> |
| 2206781-001F EB-6-14-22 L1505741-01 | 5 | |
| 2206781-002F PW-3 L1505741-02 | 6 | <div>⁴Cn</div> |
| 2206781-003F PW-4 L1505741-03 | 7 | <div>⁵Sr</div> |
| 2206781-004F EAST LDU L1505741-04 | 8 | |
| 2206781-005F WEST LDU L1505741-05 | 9 | <div>⁶Qc</div> |
| 2206781-007F DUP-6-9-22 L1505741-06 | 10 | <div>⁷Gl</div> |
| Qc: Quality Control Summary | 11 | |
| Wet Chemistry by Method 4500CN E-2016 | 11 | <div>⁸Al</div> |
| Gl: Glossary of Terms | 12 | |
| Al: Accreditations & Locations | 13 | <div>⁹Sc</div> |
| Sc: Sample Chain of Custody | 14 | |

2206781-001F EB-6-14-22 L1505741-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:22 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/14/22 08:00
06/16/22 09:00

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206781-002F PW-3 L1505741-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:23 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/14/22 08:30
06/16/22 09:00

2206781-003F PW-4 L1505741-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:26 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/14/22 09:00
06/16/22 09:00

2206781-004F EAST LDU L1505741-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:27 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/14/22 09:40
06/16/22 09:00

2206781-005F WEST LDU L1505741-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:28 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/14/22 10:15
06/16/22 09:00

2206781-007F DUP-6-9-22 L1505741-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1883737 | 1 | 06/23/22 18:47 | 06/24/22 09:29 | LDT | Mt. Juliet, TN |

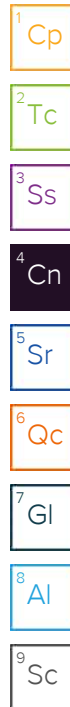
Collected by
Collected date/time
Received date/time

06/14/22 00:00
06/16/22 09:00

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/24/2022 09:22 | WG1883737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/14/22 08:30

L1505741

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/24/2022 09:23 | WG1883737 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/14/22 09:00

L1505741

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0142 | | 0.00500 | 1 | 06/24/2022 09:26 | WG1883737 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/14/22 09:40

L1505741

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/24/2022 09:27 | WG1883737 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 06/14/22 10:15

L1505741

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/24/2022 09:28 | WG1883737 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/24/2022 09:29 | WG1883737 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3807037-1 06/24/22 09:02

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1505254-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505254-05 06/24/22 09:07 • (DUP) R3807037-3 06/24/22 09:08

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1505529-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505529-05 06/24/22 09:14 • (DUP) R3807037-6 06/24/22 09:15

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3807037-2 06/24/22 09:03

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.105 | 105 | 87.1-120 | |

L1505529-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505529-04 06/24/22 09:09 • (MS) R3807037-4 06/24/22 09:10 • (MSD) R3807037-5 06/24/22 09:11

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0999 | 0.0980 | 99.9 | 98.0 | 1 | 90.0-110 | | | 1.92 | 20 |

L1505529-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505529-06 06/24/22 09:16 • (MS) R3807037-7 06/24/22 09:17 • (MSD) R3807037-8 06/24/22 09:18

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0972 | 0.0962 | 97.2 | 96.2 | 1 | 90.0-110 | | | 1.03 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

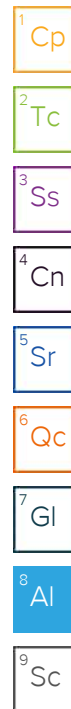
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

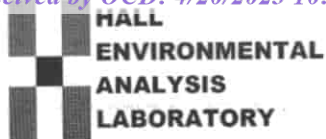
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 2295 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

D179

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|---------|-----------------------|--------------|-----------------------------|
| 1 | 2206781-001F | EB-6-14-22 | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 8:00:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2206781-002F | PW-3 | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 8:30:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2206781-003F | PW-4 | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 9:00:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2206781-004F | East LDU | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 9:40:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2206781-005F | West LDU | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 10:15:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2206781-007F | DUP-6-9-22 | 500AMBHDP
F-NAOH | Groundw | 6/14/2022 | 1 | Total Cyanide J and MDL -06 |

5755 8089 3826
 Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N
 DRAFT
 2.7 + 0 = 2.7

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|------------------------|-----------------------|---------------------------------|----------------------|--------------------|---|
| Relinquished By: CMC | Date: 6/15/2022 | Time: 10:12 AM | Received By: [Signature] | Date: 6/16/22 | Time: 09:00 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE
FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool? _____
Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-68172 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 68172 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157155 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-68172 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 68172 | | | RunNo: 88908 | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | | | SeqNo: 3157156 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0027 | 0.0030 | 0.002000 | 0 | 137 | 50 | 150 | | | J |
| Beryllium | 0.0016 | 0.0020 | 0.002000 | 0 | 80.6 | 50 | 150 | | | J |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.4 | 50 | 150 | | | J |
| Chromium | 0.0050 | 0.0060 | 0.006000 | 0 | 83.1 | 50 | 150 | | | J |
| Cobalt | 0.0076 | 0.0060 | 0.006000 | 0 | 127 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.7 | 50 | 150 | | | J |
| Silver | 0.0051 | 0.0050 | 0.005000 | 0 | 101 | 50 | 150 | | | |
| Vanadium | 0.0087 | 0.050 | 0.01000 | 0 | 87.4 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-68172 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 68172 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157157 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| Sample ID: 2206781-005DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: West LDU | Batch ID: 68172 | RunNo: 88908 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | SeqNo: 3157172 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.56 | 0.0030 | 0.5000 | 0.06750 | 97.5 | 70 | 130 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 70 | 130 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0.01222 | 93.7 | 70 | 130 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 97.8 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0.02470 | 101 | 70 | 130 | | | |
| Zinc | 0.44 | 0.010 | 0.5000 | 0 | 87.6 | 70 | 130 | | | |

| Sample ID: 2206781-005DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: West LDU | Batch ID: 68172 | RunNo: 88908 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | SeqNo: 3157173 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.56 | 0.0030 | 0.5000 | 0.06750 | 98.8 | 70 | 130 | 1.15 | 20 | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | 1.22 | 20 | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 1.89 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0.01222 | 95.1 | 70 | 130 | 1.45 | 20 | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.7 | 70 | 130 | 0.963 | 20 | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0.02470 | 100 | 70 | 130 | 0.582 | 20 | |
| Zinc | 0.44 | 0.010 | 0.5000 | 0 | 88.5 | 70 | 130 | 0.945 | 20 | |

| Sample ID: 2206781-007DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: DUP-6-9-22 | Batch ID: 68172 | RunNo: 88908 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | SeqNo: 3157178 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.62 | 0.0030 | 0.5000 | 0.1425 | 95.4 | 70 | 130 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0.004611 | 102 | 70 | 130 | | | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 92.1 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0.02435 | 93.6 | 70 | 130 | | | |
| Vanadium | 0.63 | 0.050 | 0.5000 | 0.1278 | 99.8 | 70 | 130 | | | |

| Sample ID: 2206781-007DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: DUP-6-9-22 | Batch ID: 68172 | RunNo: 88908 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | SeqNo: 3157179 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.62 | 0.0030 | 0.5000 | 0.1425 | 94.9 | 70 | 130 | 0.353 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0.004611 | 102 | 70 | 130 | 0.149 | 20 | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 92.8 | 70 | 130 | 0.730 | 20 | |

Qualifiers:

| | |
|--|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Estimated value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of range due to dilution or matrix interference | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2206781-007DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: DUP-6-9-22 | Batch ID: 68172 | RunNo: 88908 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | SeqNo: 3157179 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0.02435 | 94.9 | 70 | 130 | 1.33 | 20 | |
| Vanadium | 0.63 | 0.050 | 0.5000 | 0.1278 | 99.5 | 70 | 130 | 0.276 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206781-005DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: West LDU | Batch ID: 68172 | RunNo: 88936 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/21/2022 | SeqNo: 3158298 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 1.5 | 0.030 | 0.5000 | 1.011 | 97.8 | 70 | 130 | | | |
| Nickel | 1.5 | 0.050 | 0.5000 | 1.081 | 93.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2206781-005DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: West LDU | Batch ID: 68172 | RunNo: 88936 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/21/2022 | SeqNo: 3158299 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 1.5 | 0.030 | 0.5000 | 1.011 | 96.2 | 70 | 130 | 0.527 | 20 | |
| Nickel | 1.6 | 0.050 | 0.5000 | 1.081 | 96.5 | 70 | 130 | 0.913 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206781-007DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: DUP-6-9-22 | Batch ID: 68172 | RunNo: 88936 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/21/2022 | SeqNo: 3158301 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.047 | 0.0050 | 0.1000 | 0 | 46.5 | 70 | 130 | | | S |
| Zinc | 0.63 | 0.010 | 0.5000 | 0.1610 | 93.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2206781-007DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: DUP-6-9-22 | Batch ID: 68172 | RunNo: 88936 | | | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/21/2022 | SeqNo: 3158302 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.049 | 0.0050 | 0.1000 | 0 | 49.1 | 70 | 130 | 5.33 | 20 | S |
| Zinc | 0.62 | 0.010 | 0.5000 | 0.1610 | 91.3 | 70 | 130 | 1.34 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152486 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152487 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0023 | 0.0020 | 0.002000 | 0 | 114 | 50 | 150 | | | |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 92.5 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 127 | 50 | 150 | | | |
| Chromium | 0.0064 | 0.0060 | 0.006000 | 0 | 106 | 50 | 150 | | | |
| Cobalt | 0.0071 | 0.0060 | 0.006000 | 0 | 118 | 50 | 150 | | | |
| Nickel | 0.0032 | 0.010 | 0.005000 | 0 | 64.9 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 94.6 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 112 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152488 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.9 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: 2206781-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-6-14-22 | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152504 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.5 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 108 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.005808 | 99.1 | 70 | 130 | | | |

| Sample ID: 2206781-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|--------|----------|------|
| Client ID: EB-6-14-22 | Batch ID: B88784 | RunNo: 88784 | | | | | | | | |
| Prep Date: | Analysis Date: 6/15/2022 | SeqNo: 3152505 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | 0.498 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | 0.780 | 20 | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | 0.336 | 20 | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | 0.372 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | 0.0229 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.7 | 70 | 130 | 0.294 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 112 | 70 | 130 | 3.37 | 20 | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | 1.01 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.005808 | 98.7 | 70 | 130 | 0.494 | 20 | |

| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156651 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

| Sample ID: LLLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156652 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: LCSW | Batch ID: B88897 | | | RunNo: 88897 | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | | | SeqNo: 3156653 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-68172 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68172 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155295 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-68172 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68172 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155296 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Arsenic | 0.00092 | 0.0010 | 0.001000 | 0 | 91.5 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.5 | 50 | 150 | | | J |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68172 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68172 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155297 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.6 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.5 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157492 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157493 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Lead | 0.00057 | 0.00050 | 0.0005000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157494 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|--------|----------|------|
| Sample ID: LCS D | SampType: LCS D | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSS02 | Batch ID: B88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157495 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | 1.71 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | 0.0894 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | 2.56 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | 1.84 | 20 | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157510 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00092 | 0.0010 | 0.001000 | 0 | 92.2 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2206781-001EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-6-14-22 | | Batch ID: B88918 | | RunNo: 88918 | | | | | | |
| Prep Date: | | Analysis Date: 6/21/2022 | | SeqNo: 3157516 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.4 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 93.2 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2206781-001EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-6-14-22 | | Batch ID: B88918 | | RunNo: 88918 | | | | | | |
| Prep Date: | | Analysis Date: 6/21/2022 | | SeqNo: 3157517 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | 4.05 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | 3.79 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.8 | 70 | 130 | 3.83 | 20 | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | 4.82 | 20 | |

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2206781-002EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PW-3 | | Batch ID: B88918 | | RunNo: 88918 | | | | | | |
| Prep Date: | | Analysis Date: 6/21/2022 | | SeqNo: 3157519 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |
| Arsenic | 0.031 | 0.0010 | 0.02500 | 0.003579 | 108 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 92.7 | 70 | 130 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0.001073 | 106 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68186 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68186 | RunNo: 88841 |
| Prep Date: 6/17/2022 | Analysis Date: 6/17/2022 | SeqNo: 3154507 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-68186 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68186 | RunNo: 88841 |
| Prep Date: 6/17/2022 | Analysis Date: 6/17/2022 | SeqNo: 3154508 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00022 0.00020 0.0001500 | 0 145 50 150 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68186 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68186 | RunNo: 88841 |
| Prep Date: 6/17/2022 | Analysis Date: 6/17/2022 | SeqNo: 3154509 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 0.00020 0.005000 | 0 105 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68189 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68189 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156949 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68189 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68189 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156952 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68189 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 68189 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156955 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 99.6 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-68189 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 68189 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156957 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 115 70 130 14.4 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68185 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168760 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.018 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.034 | | 0.03750 | | 90.2 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68185 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168761 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 92.4 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 106 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68185 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168763 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 90.2 | 31.7 | 75.4 | 2.40 | 20 | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160360 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 96.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160361 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55 | 0.050 | 0.5000 | 0 | 109 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206781-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PW-3 | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160366 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Surr: BFB | 43 | | 20.00 | | 216 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206781-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PW-3 | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160367 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.52 | 0.050 | 0.5000 | 0 | 104 | 70 | 130 | 2.73 | 20 | |
| Surr: BFB | 43 | | 20.00 | | 214 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A88912 | | RunNo: 88912 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157839 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.1 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 96.4 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 97.4 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 92.1 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A88912 | | RunNo: 88912 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157862 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: A88912 | RunNo: 88912 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157862 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 97.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: A88962 | RunNo: 88962 | | | | | | | | |
| Prep Date: | Analysis Date: 6/22/2022 | SeqNo: 3159131 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.1 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.7 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 96.4 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 92.4 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 89.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.1 | | 10.00 | | 90.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: A88962 | RunNo: 88962 | | | | | | | | |
| Prep Date: | Analysis Date: 6/22/2022 | SeqNo: 3159170 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A88962 | | | RunNo: 88962 | | | | | | |
| Prep Date: | Analysis Date: 6/22/2022 | | | SeqNo: 3159170 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 97.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68202 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68202 | RunNo: 89133 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167345 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 56.8 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 63.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.9 | 48 | 155 | | | |

| Sample ID: lcs-68202 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68202 | RunNo: 89133 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167346 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68202 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68202 | | RunNo: 89133 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3167346 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 74 | 10 | 100.0 | 0 | 73.9 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 65 | 5.0 | 100.0 | 0 | 64.8 | 15 | 89.8 | | | |
| Phenol | 90 | 20 | 200.0 | 0 | 44.8 | 17 | 61.1 | | | |
| Pyrene | 91 | 10 | 100.0 | 0 | 90.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 57.1 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 83.6 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 80 | | 100.0 | | 80.3 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.5 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-68202 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68202 | | RunNo: 89133 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3167347 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 50 | 10 | 100.0 | 0 | 49.9 | 21.3 | 104 | 38.7 | 45.3 | |
| 1,4-Dichlorobenzene | 40 | 5.0 | 100.0 | 0 | 40.1 | 15 | 89.8 | 47.0 | 39.6 | R |
| Phenol | 52 | 20 | 200.0 | 0 | 26.2 | 17 | 61.1 | 52.4 | 42.5 | R |
| Pyrene | 68 | 10 | 100.0 | 0 | 67.9 | 61 | 123 | 28.9 | 11.8 | R |
| Surr: 2-Fluorophenol | 66 | | 200.0 | | 33.0 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 52 | | 200.0 | | 26.0 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 66.7 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 43 | | 100.0 | | 43.1 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 49.9 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 72.6 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68202 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68202 | RunNo: 89096 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | SeqNo: 3165504 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 78.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.3 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 75.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 107 | 72.3 | 147 | | | |

| Sample ID: lcs-68202 If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68202 | RunNo: 89096 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | SeqNo: 3165505 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.78 | 0.10 | 2.000 | 0 | 39.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 105 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 76.3 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206781

08-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68202 lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 68202 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3165505 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 90.6 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-68202 lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68202 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3165506 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | 2.53 | 30.1 | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 21.3 | 79.9 | 2.78 | 25.6 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 22.2 | 80.3 | 1.38 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 20.6 | 80.1 | 2.78 | 25 | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | 0 | 25.6 | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 103 | 52.9 | 123 | 1.92 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | 0 | 24.1 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | 0 | 20 | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 44.4 | 136 | 0 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 31.4 | 165 | 5.71 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 78.7 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.6 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 74 | | 100.0 | | 73.7 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 93.1 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206781**

RcptNo: 1

Received By: **Cheyenne Cason** 6/15/2022 7:00:00 AMCompleted By: **Cheyenne Cason** 6/15/2022 8:12:37 AMReviewed By: *see 6/15/22**Chad**Chad*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:*126*

(<2 or >12 unless noted)

Adjusted? *NO*Checked by: *yn 6/15/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

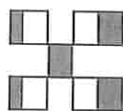
Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.8 | Good | Yes | | | |
| 2 | 3.1 | Good | Yes | | | |
| 3 | 0.8 | Good | Yes | | | |



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| | | | |
|--|-------------|---|------------------------------|
| Client: Marathon Gallup Refinery | | X Standard Rush | |
| Mailing Address: 92 Giant Crossing Road
Jamestown, NM, 87347
Phone #: 808-640-1823
Mail or Fax#: | | Project Name: 2022 GW Sampling 2nd Quarter
Project #: 697-080-001 | |
| QC Package: X Standard
Accreditation: ☐ Az Compliance ☐ Level 4 (Full Validation)
NELAC ☐ Other | | Project Manager: Lesli Alexander/Mackensie Swift | |
| X Standard
X DELAC (Type) | | Sampler: On Ice: ☒ Yes ☐ No
of Coolers: 3 | |
| Cooler Temp (including CF): | | Cooler Temp (including CF): See Remarks | |
| Date | Time | Matrix | Sample Name |
| 6/14 | 8:00 | | EB-6-14-22 |
| 6/14 | 8:30 | | PW-3 |
| 6/14 | 9:00 | | PW-3-4 per Brian
Cristina |
| 6/14 | 9:40 | | EAST LDU |
| 6/14 | 10:15 | | WEST LDU |
| 6/14 | 10:15 | | EB-6-14-22 |
| 6/14 | — | | Dup-6-14-22 |
| | | | Trip Blank |
| Relinquished by: H. J. ... | | Relinquished by: H. J. ... | |
| Date: 6/14 | Time: 11:30 | Received by: One Carr | |
| Date: 6/14 | Time: 11:30 | Date: 6/15/22 | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 15, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Qtr

OrderNo.: 2206866

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/16/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 08, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206866
Date: 8/15/2022

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Qtr

Analytical notes Regarding EPA Method 8270:

Sample OW-59 had poor surrogate recoveries due to the emulsive nature of the sample.

Analytical Notes Regarding EPA Method 8270:

Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270SIMS, depending which method needs the least dilution. In this report Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMS for samples OW-66 and OW-55.

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 3:53:30 PM | G88994 |
| Surr: BFB | 99.2 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 3:53:30 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Acetone | 3.4 | 2.5 | 10 | J | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Methylene Chloride | 8.5 | 5.0 | 30 | J | µg/L | 10 | 6/27/2022 3:24:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Surr: 4-Bromofluorobenzene | 93.3 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Surr: Dibromofluoromethane | 95.4 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 7:01:00 PM | R89027 |
| Surr: Toluene-d8 | 85.0 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 7:01:00 PM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/21/2022 6:05:33 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.019 | 0.016 | 0.064 | J | mg/L | 1 | 6/29/2022 12:54:36 AM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 12:54:36 AM | 68185 |
| Surr: DNOP | 95.8 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 12:54:36 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: 2-Fluorophenol | 52.0 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: Phenol-d5 | 37.8 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 71.5 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: Nitrobenzene-d5 | 64.0 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 68.5 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 76.6 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 5:47:33 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 5:06:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 74.8 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 5:06:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 89.0 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 5:06:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:53:31 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 2:17:21 PM | 68172 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 2:17:21 PM | 68172 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 2:17:21 PM | 68172 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 2:17:21 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:38:12 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| Zinc | 0.0054 | 0.0032 | 0.010 | J | mg/L | 1 | 6/20/2022 5:47:00 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:47:41 AM | B88918 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:47:41 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:47:41 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:47:41 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:40:20 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:15:00 AM

Lab ID: 2206866-001F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 11:18:00 AM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 4:17:21 PM | G88994 |
| Surr: BFB | 95.4 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 4:17:21 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Methyl tert-butyl ether (MTBE) | 1.9 | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 92.3 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Surr: 4-Bromofluorobenzene | 86.3 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 8:10:00 PM | R89027 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 8:10:00 PM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 6:35:35 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.027 | 0.016 | 0.064 | J | mg/L | 1 | 6/29/2022 1:18:22 AM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 1:18:22 AM | 68185 |
| Surr: DNOP | 80.5 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 1:18:22 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: 2-Fluorophenol | 61.8 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: Phenol-d5 | 44.5 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 81.0 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: Nitrobenzene-d5 | 69.4 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 72.3 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 85.7 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 6:31:36 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.26 | 0.11 | 1.0 | J | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 5:51:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 82.0 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 75.3 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 5:51:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 93.7 | 0 | 72.3-147 | | %Rec | 1 | 6/28/2022 5:51:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.044 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Chromium | 0.0045 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Vanadium | 0.043 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 2:55:08 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 4:48:01 PM | 68172 |
| Arsenic | 0.00078 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/20/2022 4:48:01 PM | 68172 |
| Lead | 0.00025 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 4:48:01 PM | 68172 |
| Selenium | 0.0026 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 4:48:01 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:42:29 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 8:25:00 AM

Lab ID: 2206866-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.037 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Vanadium | 0.039 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| Zinc | 0.048 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:05:52 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:50:22 AM | B88918 |
| Arsenic | 0.00070 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/21/2022 11:50:22 AM | B88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:50:22 AM | B88918 |
| Selenium | 0.0021 | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:50:22 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:44:38 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|--------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-1 |
| Project: | 2022 GW Sampling 2nd Qtr | Collection Date: | 6/15/2022 8:25:00 AM |
| Lab ID: | 2206866-002F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 11:21:00 AM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:10:00 AM

Lab ID: 2206866-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 1.7 | 0.045 | 0.25 | | mg/L | 5 | 6/23/2022 4:41:17 PM | G88994 |
| Surr: BFB | 99.9 | 0 | 70-130 | | %Rec | 5 | 6/23/2022 4:41:17 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 6.3 | 1.1 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Ethylbenzene | 5.8 | 1.1 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Methyl tert-butyl ether (MTBE) | 1300 | 20 | 50 | | µg/L | 50 | 6/25/2022 8:33:00 PM | R89027 |
| 1,2,4-Trimethylbenzene | 2.4 | 0.61 | 5.0 | J | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Xylenes, Total | 2.2 | 1.9 | 7.5 | J | µg/L | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 87.2 | 0 | 70-130 | | %Rec | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Surr: 4-Bromofluorobenzene | 78.9 | 0 | 70-130 | | %Rec | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Surr: Dibromofluoromethane | 95.4 | 0 | 70-130 | | %Rec | 5 | 6/25/2022 8:56:00 PM | R89027 |
| Surr: Toluene-d8 | 118 | 0 | 70-130 | | %Rec | 5 | 6/25/2022 8:56:00 PM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Client Sample ID: OW-54
Project: 2022 GW Sampling 2nd Qtr Collection Date: 6/15/2022 9:10:00 AM
Lab ID: 2206866-003B Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/21/2022 7:11:53 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:10:00 AM

Lab ID: 2206866-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 2.2 | 0.016 | 0.064 | | mg/L | 1 | 6/29/2022 1:42:06 AM | 68185 |
| Motor Oil Range Organics (MRO) | 1.1 | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 1:42:06 AM | 68185 |
| Surr: DNOP | 73.5 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 1:42:06 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: 2-Fluorophenol | 47.9 | 0 | 29.4-87.7 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: Phenol-d5 | 37.5 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 76.0 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: Nitrobenzene-d5 | 60.5 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 64.8 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 80.5 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 7:15:03 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Naphthalene | 0.20 | 0.20 | 0.30 | J | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| 1-Methylnaphthalene | 0.24 | 0.15 | 0.30 | J | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 6:39:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:10:00 AM

Lab ID: 2206866-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.5 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 59.9 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 6:39:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 70.2 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 6:39:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:10:00 AM

Lab ID: 2206866-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.47 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Chromium | 0.0059 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Cobalt | 0.095 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Nickel | 0.25 | 0.0053 | 0.010 | * | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 2:56:31 PM | 68172 |
| Zinc | 0.029 | 0.0039 | 0.010 | | mg/L | 1 | 6/23/2022 4:30:35 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 4:52:57 PM | 68172 |
| Arsenic | 0.0051 | 0.00063 | 0.0050 | | mg/L | 5 | 6/20/2022 6:28:18 PM | 68172 |
| Lead | 0.019 | 0.000061 | 0.00050 | * | mg/L | 1 | 6/20/2022 4:52:57 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:28:18 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:46:47 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:10:00 AM

Lab ID: 2206866-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.16 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Cobalt | 0.067 | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Nickel | 0.23 | 0.0033 | 0.010 | * | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Silver | 0.0013 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:08:05 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:53:03 AM | B88918 |
| Arsenic | 0.0036 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:53:03 AM | B88918 |
| Lead | 0.0078 | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 11:53:03 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:53:03 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:48:57 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|--------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-54 |
| Project: | 2022 GW Sampling 2nd Qtr | Collection Date: | 6/15/2022 9:10:00 AM |
| Lab ID: | 2206866-003F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|---------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 0.00561 | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 11:22:00 AM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 85 | 0.45 | 2.5 | | mg/L | 50 | 6/23/2022 5:05:11 PM | G88994 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 50 | 6/23/2022 5:05:11 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 9600 | 110 | 500 | | µg/L | 500 | 6/25/2022 9:42:00 PM | R89027 |
| Toluene | 11000 | 100 | 500 | | µg/L | 500 | 6/25/2022 9:42:00 PM | R89027 |
| Ethylbenzene | 730 | 11 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Methyl tert-butyl ether (MTBE) | 570 | 20 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,2,4-Trimethylbenzene | 960 | 6.1 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,3,5-Trimethylbenzene | 270 | 9.1 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Isopropylbenzene | 17 | 9.1 | 50 | J | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 4-Isopropyltoluene | 12 | 10 | 50 | J | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| n-Butylbenzene | 16 | 13 | 150 | J | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| n-Propylbenzene | 53 | 9.1 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Xylenes, Total | 5800 | 19 | 75 | | µg/L | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 81.1 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Surr: 4-Bromofluorobenzene | 89.8 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Surr: Dibromofluoromethane | 96.0 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 10:05:00 PM | R89027 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 10:05:00 PM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 7:41:52 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 5.1 | 0.16 | 0.64 | | mg/L | 10 | 6/30/2022 7:16:31 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 6/30/2022 7:16:31 PM | 68185 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 6/30/2022 7:16:31 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 2,4-Dimethylphenol | 12 | 5.8 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 1-Methylnaphthalene | 24 | 4.3 | 5.0 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 2-Methylnaphthalene | 41 | 4.2 | 5.0 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 2-Methylphenol | 25 | 5.0 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 3+4-Methylphenol | 28 | 5.1 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Naphthalene | 130 | 3.2 | 5.0 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Phenol | 32 | 18 | 20 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: 2-Fluorophenol | 0 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: Phenol-d5 | 37.9 | 0 | 28.5-64.7 | | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 79.7 | 0 | 18.6-129 | | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: Nitrobenzene-d5 | 65.0 | 0 | 36.9-103 | | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 68.8 | 0 | 38.1-99.9 | | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 80.7 | 0 | 48-155 | | %Rec | 1 | 6/29/2022 7:58:55 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Acenaphthene | 0.28 | 0.14 | 0.30 | J | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Fluorene | 0.86 | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Phenanthrene | 0.94 | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 7:32:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.6 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 61.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 7:32:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 71.3 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 7:32:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 2.0 | 0.0079 | 0.015 | * | mg/L | 5 | 6/23/2022 4:32:01 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Chromium | 0.010 | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Cobalt | 0.0096 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Nickel | 0.36 | 0.0053 | 0.010 | * | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Vanadium | 0.026 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 2:57:54 PM | 68172 |
| Zinc | 0.013 | 0.0039 | 0.010 | | mg/L | 1 | 6/21/2022 5:26:13 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 4:55:23 PM | 68172 |
| Arsenic | 0.0070 | 0.00063 | 0.0050 | | mg/L | 5 | 6/20/2022 6:30:44 PM | 68172 |
| Lead | 0.021 | 0.00031 | 0.0025 | * | mg/L | 5 | 6/20/2022 6:30:44 PM | 68172 |
| Selenium | 0.0020 | 0.0019 | 0.0050 | J | mg/L | 5 | 6/20/2022 6:30:44 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:51:07 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:30:00 AM

Lab ID: 2206866-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 1.4 | 0.0056 | 0.010 | | mg/L | 5 | 6/20/2022 6:21:21 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Cobalt | 0.0033 | 0.0024 | 0.0060 | J | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Nickel | 0.34 | 0.0033 | 0.010 | * | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Vanadium | 0.0022 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:10:27 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:55:45 AM | B88918 |
| Arsenic | 0.0041 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:55:45 AM | B88918 |
| Lead | 0.00032 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/21/2022 11:55:45 AM | B88918 |
| Selenium | 0.00038 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/21/2022 11:55:45 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:53:15 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|--------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-66 |
| Project: | 2022 GW Sampling 2nd Qtr | Collection Date: | 6/15/2022 9:30:00 AM |
| Lab ID: | 2206866-004F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 0.0134 | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 11:23:00 AM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|--------------|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: NSB | | |
| Gasoline Range Organics (GRO) | 23 | 0.45 | 2.5 | | mg/L | 50 | 6/23/2022 5:28:52 PM | G88994 |
| Surr: BFB | 108 | 0 | 70-130 | | %Rec | 50 | 6/23/2022 5:28:52 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: CCM | | |
| Benzene | 5700 | 110 | 500 | | µg/L | 500 | 6/25/2022 10:51:00 PM | R89027 |
| Toluene | 150 | 10 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Ethylbenzene | 430 | 11 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Methyl tert-butyl ether (MTBE) | 960 | 20 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,2,4-Trimethylbenzene | 200 | 6.1 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,3,5-Trimethylbenzene | 58 | 9.1 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Acetone | 180 | 130 | 500 | J | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Isopropylbenzene | 26 | 9.1 | 50 | J | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| n-Propylbenzene | 50 | 9.1 | 50 | J | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Styrene | 9.3 | 6.8 | 50 | J | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Xylenes, Total | 520 | 19 | 75 | | µg/L | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 96.2 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Surr: 4-Bromofluorobenzene | 113 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Surr: Dibromofluoromethane | 95.7 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 11:14:00 PM | R89027 |
| Surr: Toluene-d8 | 99.9 | 0 | 70-130 | | %Rec | 50 | 6/25/2022 11:14:00 PM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 8:11:52 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 3.9 | 0.16 | 0.64 | | mg/L | 10 | 6/30/2022 6:52:36 PM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 6/30/2022 6:52:36 PM | 68185 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 6/30/2022 6:52:36 PM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 1-Methylnaphthalene | 28 | 4.3 | 5.0 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 2-Methylnaphthalene | 15 | 4.2 | 5.0 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Naphthalene | 22 | 3.2 | 5.0 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Phenol | 24 | 18 | 20 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: 2-Fluorophenol | 52.4 | 0 | 29.4-87.7 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: Phenol-d5 | 41.2 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: 2,4,6-Tribromophenol | 71.1 | 0 | 18.6-129 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: Nitrobenzene-d5 | 61.9 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: 2-Fluorobiphenyl | 64.3 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| Surr: 4-Terphenyl-d14 | 82.4 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 11:51:04 AM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Acenaphthene | 0.60 | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Fluorene | 1.8 | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Phenanthrene | 1.5 | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 9:31:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.1 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 54.4 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 9:31:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 71.4 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 9:31:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.74 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Chromium | 0.0068 | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Cobalt | 0.033 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Nickel | 0.24 | 0.0053 | 0.010 | * | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Vanadium | 0.020 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 2:59:17 PM | 68172 |
| Zinc | 0.022 | 0.0039 | 0.010 | | mg/L | 1 | 6/21/2022 5:40:26 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 4:57:50 PM | 68172 |
| Arsenic | 0.0084 | 0.00063 | 0.0050 | | mg/L | 5 | 6/20/2022 6:33:10 PM | 68172 |
| Lead | 0.0061 | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 4:57:50 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:33:10 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:55:23 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 9:45:00 AM

Lab ID: 2206866-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.57 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Cobalt | 0.0079 | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Nickel | 0.23 | 0.0033 | 0.010 | * | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Silver | 0.0018 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Vanadium | 0.0032 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| Zinc | 0.048 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:12:37 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 11:58:26 AM | B88918 |
| Arsenic | 0.0045 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 11:58:26 AM | B88918 |
| Lead | 0.000059 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/21/2022 11:58:26 AM | B88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 11:58:26 AM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 11:57:31 AM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Qtr
Lab ID: 2206866-005F

Client Sample ID: OW-55
Collection Date: 6/15/2022 9:45:00 AM
Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|---------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 0.00529 | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 11:24:00 AM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.45 | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 6:39:59 PM | G88994 |
| Surr: BFB | 1240 | 0 | 70-130 | S | %Rec | 1 | 6/23/2022 6:39:59 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 1.0 | 0.23 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Methyl tert-butyl ether (MTBE) | 38 | 0.39 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| 1,2,4-Trimethylbenzene | 0.23 | 0.12 | 1.0 | J | µg/L | 1 | 6/26/2022 | R89027 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| 1,2-Dichloroethane (EDC) | 14 | 0.25 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Acetone | 5.3 | 2.5 | 10 | J | µg/L | 1 | 6/26/2022 | R89027 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/26/2022 | R89027 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/26/2022 | R89027 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Chloromethane | 0.93 | 0.41 | 3.0 | J | µg/L | 1 | 6/26/2022 | R89027 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| 1,1-Dichloroethane | 0.35 | 0.27 | 1.0 | J | µg/L | 1 | 6/26/2022 | R89027 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Isopropylbenzene | 0.76 | 0.18 | 1.0 | J | µg/L | 1 | 6/26/2022 | R89027 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| sec-Butylbenzene | 0.16 | 0.14 | 1.0 | J | µg/L | 1 | 6/26/2022 | R89027 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/26/2022 | R89027 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/26/2022 | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 94.2 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 | R89027 |
| Surr: 4-Bromofluorobenzene | 86.7 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 | R89027 |
| Surr: Dibromofluoromethane | 90.0 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 | R89027 |
| Surr: Toluene-d8 | 94.1 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 8:42:03 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 1.1 | 0.016 | 0.064 | | mg/L | 1 | 6/29/2022 2:53:18 AM | 68185 |
| Motor Oil Range Organics (MRO) | 0.064 | 0.052 | 0.080 | J | mg/L | 1 | 6/29/2022 2:53:18 AM | 68185 |
| Surr: DNOP | 93.7 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 2:53:18 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: 2-Fluorophenol | 44.9 | 0 | 29.4-87.7 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: Phenol-d5 | 35.5 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: 2,4,6-Tribromophenol | 68.1 | 0 | 18.6-129 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: Nitrobenzene-d5 | 52.3 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 54.2 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 78.7 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 12:32:42 PM | 68202 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/28/2022 10:23:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.6 | 0 | 31.6-100 | | %Rec | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Surr: 2-Fluorobiphenyl | 53.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/28/2022 10:23:00 PM | 68202 |
| Surr: 4-Terphenyl-d14 | 71.9 | 0 | 72.3-147 | S | %Rec | 1 | 6/28/2022 10:23:00 PM | 68202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.46 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Cobalt | 0.0047 | 0.0035 | 0.0060 | J | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Nickel | 0.069 | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Vanadium | 0.0063 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 3:00:33 PM | 68172 |
| Zinc | 0.0066 | 0.0039 | 0.010 | J | mg/L | 1 | 6/21/2022 5:42:36 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 5:00:16 PM | 68172 |
| Arsenic | 0.0042 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 6:35:37 PM | 68172 |
| Lead | 0.0013 | 0.000061 | 0.00050 | | mg/L | 1 | 6/20/2022 5:00:16 PM | 68172 |
| Selenium | ND | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:35:37 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:03:54 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:10:00 AM

Lab ID: 2206866-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.37 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Nickel | 0.062 | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Silver | 0.0017 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Vanadium | 0.0018 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:14:47 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 12:01:07 PM | B88918 |
| Arsenic | 0.0020 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 12:01:07 PM | B88918 |
| Lead | 0.00025 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/21/2022 12:01:07 PM | B88918 |
| Selenium | 0.00068 | 0.00034 | 0.0010 | J | mg/L | 1 | 6/21/2022 12:01:07 PM | B88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:06:02 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Qtr

Lab ID: 2206866-006F

Client Sample ID: OW-56

Collection Date: 6/15/2022 10:10:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|---------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 0.00801 | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 1:26:00 PM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.35 | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 7:03:43 PM | G88994 |
| Surr: BFB | 6400 | 0 | 70-130 | S | %Rec | 1 | 6/23/2022 7:03:43 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Methyl tert-butyl ether (MTBE) | 9.6 | 0.39 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,2,4-Trimethylbenzene | 0.19 | 0.12 | 1.0 | J | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Acetone | 2.9 | 2.5 | 10 | J | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Isopropylbenzene | 0.38 | 0.18 | 1.0 | J | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Surr: 1,2-Dichloroethane-d4 | 92.8 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Surr: Dibromofluoromethane | 95.7 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 12:23:00 AM | R89027 |
| Surr: Toluene-d8 | 96.7 | 0 | 70-130 | | %Rec | 1 | 6/26/2022 12:23:00 AM | R89027 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/21/2022 9:12:07 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | 0.58 | 0.016 | 0.064 | | mg/L | 1 | 6/29/2022 3:17:01 AM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 3:17:01 AM | 68185 |
| Surr: DNOP | 82.7 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 3:17:01 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: 2-Fluorophenol | 27.8 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: Phenol-d5 | 36.8 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 12.1 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: Nitrobenzene-d5 | 62.9 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 67.8 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 82.7 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 3:21:31 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 5.9 | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 1:48:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 72.6 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 60.8 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 1:48:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 80.3 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 1:48:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.092 | 0.0079 | 0.015 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Cobalt | ND | 0.018 | 0.030 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Nickel | 0.037 | 0.027 | 0.050 | J | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Vanadium | ND | 0.018 | 0.25 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| Zinc | ND | 0.019 | 0.050 | | mg/L | 5 | 6/20/2022 3:47:28 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/20/2022 6:38:04 PM | 68172 |
| Arsenic | 0.0059 | 0.0013 | 0.010 | J | mg/L | 10 | 6/20/2022 6:38:04 PM | 68172 |
| Lead | 0.0016 | 0.00061 | 0.0050 | J | mg/L | 10 | 6/20/2022 6:38:04 PM | 68172 |
| Selenium | ND | 0.0037 | 0.010 | | mg/L | 10 | 6/20/2022 6:38:04 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:08:10 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.0098 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Nickel | 0.037 | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Silver | 0.0050 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Vanadium | 0.0052 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| Zinc | 0.0062 | 0.0032 | 0.010 | J | mg/L | 1 | 6/20/2022 6:18:58 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/21/2022 1:21:50 PM | D88918 |
| Arsenic | 0.0043 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/21/2022 1:21:50 PM | D88918 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/21/2022 1:21:50 PM | D88918 |
| Selenium | 0.0018 | 0.0017 | 0.0050 | J | mg/L | 5 | 6/21/2022 1:21:50 PM | D88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:10:18 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-007F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 0.0193 | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 1:29:00 PM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 7:27:21 PM | G88994 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 7:27:21 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | 2.2 | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 98.3 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 3:47:00 PM | W89041 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 3:47:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/21/2022 9:57:06 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: ED | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 6/29/2022 3:40:39 AM | 68185 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 6/29/2022 3:40:39 AM | 68185 |
| Surr: DNOP | 76.7 | 0 | 42.2-138 | | %Rec | 1 | 6/29/2022 3:40:39 AM | 68185 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: 2-Fluorophenol | 55.6 | 0 | 29.4-87.7 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: Phenol-d5 | 42.7 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 70.1 | 0 | 18.6-129 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: Nitrobenzene-d5 | 63.9 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 67.6 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 84.4 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 4:04:51 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.22 | 0.11 | 1.0 | J | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 2:36:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 73.8 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 2:36:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 85.4 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 2:36:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.045 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Chromium | 0.0044 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Vanadium | 0.045 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/20/2022 3:03:19 PM | 68172 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 5:10:03 PM | 68172 |
| Arsenic | 0.00074 | 0.00013 | 0.0010 | J | mg/L | 1 | 6/20/2022 5:10:03 PM | 68172 |
| Lead | 0.00024 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 5:10:03 PM | 68172 |
| Selenium | 0.0023 | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 5:10:03 PM | 68172 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:12:27 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.037 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Vanadium | 0.038 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| Zinc | 0.020 | 0.0032 | 0.010 | | mg/L | 1 | 6/20/2022 6:23:30 PM | B88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 12:14:35 PM | D88918 |
| Arsenic | 0.00066 | 0.00012 | 0.0010 | J | mg/L | 1 | 6/21/2022 12:14:35 PM | D88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 12:14:35 PM | D88918 |
| Selenium | 0.0021 | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 12:14:35 PM | D88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:14:36 PM | 68219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022

Lab ID: 2206866-008F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 6/28/2022 1:30:00 PM | R89389 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-15-22

Project: 2022 GW Sampling 2nd Qtr

Collection Date: 6/15/2022 10:40:00 AM

Lab ID: 2206866-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Acetone | 4.2 | 2.5 | 10 | J | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 98.0 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 93.3 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:10:00 PM | W89041 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:10:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206866-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206866-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:33:00 PM | W89041 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 6/27/2022 4:33:00 PM | W89041 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206866

Date Reported: 8/15/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Qtr

Collection Date:

Lab ID: 2206866-010B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/21/2022 10:27:05 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

July 01, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1506159

Samples Received: 06/17/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

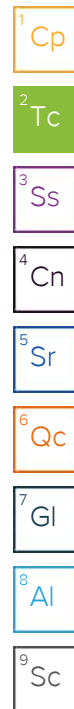
A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Cp: Cover Page | 1 |
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| Cn: Case Narrative | 4 |
| Sr: Sample Results | 5 |
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| 2206866-002F OW-1 L1506159-02 | 6 |
| 2206866-003F OW-54 L1506159-03 | 7 |
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2206866-001F EB-6-15-22 L1506159-01 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1884563 | 1 | 06/26/22 18:10 | 06/28/22 11:18 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 08:15
06/17/22 09:00

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206866-002F OW-1 L1506159-02 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1884563 | 1 | 06/26/22 18:10 | 06/28/22 11:21 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 08:25
06/17/22 09:00

2206866-003F OW-54 L1506159-03 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1884563 | 1 | 06/26/22 18:10 | 06/28/22 11:22 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 09:10
06/17/22 09:00

2206866-004F OW-66 L1506159-04 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1884563 | 1 | 06/26/22 18:10 | 06/28/22 11:23 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 09:30
06/17/22 09:00

2206866-005F OW-55 L1506159-05 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1884563 | 1 | 06/26/22 18:10 | 06/28/22 11:24 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 09:45
06/17/22 09:00

2206866-006F OW-56 L1506159-06 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1885513 | 1 | 06/27/22 01:52 | 06/28/22 13:26 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 10:10
06/17/22 09:00

2206866-007F OW-59 L1506159-07 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1885513 | 1 | 06/27/22 01:52 | 06/28/22 13:29 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 10:40
06/17/22 09:00

2206866-008F DUP-6-15-22 L1506159-08 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1885513 | 1 | 06/27/22 01:52 | 06/28/22 13:30 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/15/22 00:00
06/17/22 09:00

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/28/2022 11:18 | WG1884563 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/28/2022 11:21 | WG1884563 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00561 | | 0.00500 | 1 | 06/28/2022 11:22 | WG1884563 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0134 | | 0.00500 | 1 | 06/28/2022 11:23 | WG1884563 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00529 | | 0.00500 | 1 | 06/28/2022 11:24 | WG1884563 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00801 | | 0.00500 | 1 | 06/28/2022 13:26 | WG1885513 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0193 | | 0.00500 | 1 | 06/28/2022 13:29 | WG1885513 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/28/2022 13:30 | WG1885513 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1506159-01,02,03,04,05

Method Blank (MB)

(MB) R3808298-1 06/28/22 11:03

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1505947-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1505947-02 06/28/22 11:08 • (DUP) R3808298-3 06/28/22 11:09

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 16.0 | | 20 |

L1505947-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1505947-04 06/28/22 11:15 • (DUP) R3808298-6 06/28/22 11:16

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 21.4 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3808298-2 06/28/22 11:04

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.104 | 104 | 87.1-120 | |

L1505947-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505947-03 06/28/22 11:10 • (MS) R3808298-4 06/28/22 11:11 • (MSD) R3808298-5 06/28/22 11:12

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.101 | 0.102 | 101 | 102 | 1 | 90.0-110 | | | 0.985 | 20 |

L1506159-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506159-01 06/28/22 11:18 • (MS) R3808298-7 06/28/22 11:19 • (MSD) R3808298-8 06/28/22 11:20

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.100 | 0.101 | 100 | 101 | 1 | 90.0-110 | | | 0.995 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3808449-1 06/28/22 13:04

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1505624-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1505624-06 06/28/22 13:08 • (DUP) R3808449-3 06/28/22 13:09

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1506020-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1506020-02 06/28/22 13:17 • (DUP) R3808449-6 06/28/22 13:18

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3808449-2 06/28/22 13:05

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.102 | 102 | 87.1-120 | |

L1505673-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505673-03 06/28/22 13:10 • (MS) R3808449-4 06/28/22 13:11 • (MSD) R3808449-5 06/28/22 13:12

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0998 | 0.0997 | 94.9 | 94.8 | 1 | 90.0-110 | | | 0.100 | 20 |

L1506042-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506042-01 06/28/22 13:21 • (MS) R3808449-7 06/28/22 13:22 • (MSD) R3808449-8 06/28/22 13:23

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0774 | 0.0788 | 77.4 | 78.8 | 1 | 90.0-110 | J6 | J6 | 1.79 | 20 |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

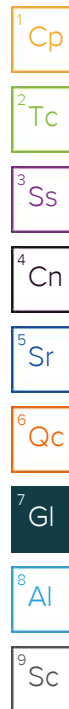
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |



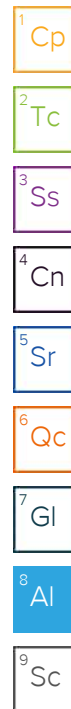
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

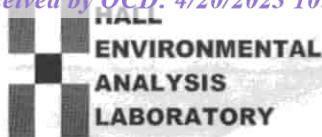
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

B249

 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107

Website: www.hallenvironmental.com

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|---|--------------|-------------------------|-------------|------------------------------|-----------------------|----------------------------|-----------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206866-001F | EB-6-15-22 | 500AMBHDP | Groundw | 6/15/2022 8:15:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2206866-002F | OW-1 | 500AMBHDP | Groundw | 6/15/2022 8:25:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2206866-003F | OW-54 | 500AMBHDP | Groundw | 6/15/2022 9:10:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2206866-004F | OW-66 | 500AMBHDP | Groundw | 6/15/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2206866-005F | OW-55 | 500AMBHDP | Groundw | 6/15/2022 9:45:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2206866-006F | OW-56 | 500AMBHDP | Groundw | 6/15/2022 10:10:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2206866-007F | OW-59 | 500AMBHDP | Groundw | 6/15/2022 10:40:00 AM | 1 | Total Cyanide J and MDL -07 |
| 8 | 2206866-008F | DUP-6-15-22 | 500AMBHDP | Groundw | 6/15/2022 | 1 | Total Cyanide J and MDL -08 |

DRA7 1.8 to = 1.8

Sample Receipt Checklist

 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Fed ex 5755 8089 3848

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------------|----------------------|-------------------------------|----------------------|-------------------|--|--|
| Relinquished By: CMC | Date: 6/16/2022 | Time: 8:06 AM | Received By: Thom Sisk | Date: 6/17/22 | Time: 0900 | REPORT TRANSMITTAL DESIRED:
☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples _____ °C Attempt to Cool? _____ | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-68172 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 68172 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157155 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-68172 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 68172 | | | RunNo: 88908 | | | | | | |
| Prep Date: 6/16/2022 | Analysis Date: 6/20/2022 | | | SeqNo: 3157156 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0027 | 0.0030 | 0.002000 | 0 | 137 | 50 | 150 | | | J |
| Beryllium | 0.0016 | 0.0020 | 0.002000 | 0 | 80.6 | 50 | 150 | | | J |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.4 | 50 | 150 | | | J |
| Chromium | 0.0050 | 0.0060 | 0.006000 | 0 | 83.1 | 50 | 150 | | | J |
| Cobalt | 0.0076 | 0.0060 | 0.006000 | 0 | 127 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.7 | 50 | 150 | | | J |
| Silver | 0.0051 | 0.0050 | 0.005000 | 0 | 101 | 50 | 150 | | | |
| Vanadium | 0.0087 | 0.050 | 0.01000 | 0 | 87.4 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-68172 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 68172 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157157 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.1 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.8 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.7 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 94.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156651 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156652 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 92.8 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.5 | 50 | 150 | | | J |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Chromium | 0.0054 | 0.0060 | 0.006000 | 0 | 90.5 | 50 | 150 | | | J |
| Cobalt | 0.0057 | 0.0060 | 0.006000 | 0 | 94.4 | 50 | 150 | | | J |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 104 | 50 | 150 | | | J |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156653 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.6 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.2 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID: 2206866-001EMS | | SampType: MS | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | |
| Client ID: EB-6-15-22 | | Batch ID: B88897 | | | RunNo: 88897 | | | | | |
| Prep Date: | | Analysis Date: 6/20/2022 | | | SeqNo: 3156657 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.8 | 70 | 130 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.7 | 70 | 130 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.5 | 70 | 130 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.3 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.005374 | 95.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|-------|----------|------|
| Sample ID: 2206866-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-6-15-22 | | Batch ID: B88897 | | RunNo: 88897 | | | | | | |
| Prep Date: | | Analysis Date: 6/20/2022 | | SeqNo: 3156658 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.0 | 70 | 130 | 1.89 | 20 | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 0.586 | 20 | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 70 | 130 | 1.55 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | 0.854 | 20 | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 70 | 130 | 1.64 | 20 | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.8 | 70 | 130 | 1.52 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 70 | 130 | 0.781 | 20 | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.4 | 70 | 130 | 1.94 | 20 | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.005374 | 94.0 | 70 | 130 | 1.79 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68172 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68172 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155295 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68172 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68172 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155296 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Arsenic | 0.00092 | 0.0010 | 0.001000 | 0 | 91.5 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.5 | 50 | 150 | | | J |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68172 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68172 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155297 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.6 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.5 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2206866-008DMSLL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP-6-15-22 | | Batch ID: 68172 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/16/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3156033 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 70 | 130 | | | |
| Arsenic | 0.031 | 0.0010 | 0.02500 | 0.0007358 | 120 | 70 | 130 | | | |
| Lead | 0.010 | 0.00050 | 0.01250 | 0.0002351 | 79.7 | 70 | 130 | | | |
| Selenium | 0.034 | 0.0010 | 0.02500 | 0.002340 | 127 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157492 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157493 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Lead | 0.00057 | 0.00050 | 0.0005000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157494 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|--------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|--------|----------|------|
| Sample ID: LCS D | SampType: LCS D | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSS02 | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157495 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | 1.71 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | 0.0894 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | 2.56 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | 1.84 | 20 | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B88918 | | RunNo: 88918 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3157510 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00092 | 0.0010 | 0.001000 | 0 | 92.2 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: D88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157597 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: D88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157598 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00098 | 0.0010 | 0.001000 | 0 | 97.9 | 50 | 150 | | | J |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 101 | 50 | 150 | | | |
| Selenium | 0.00080 | 0.0010 | 0.001000 | 0 | 80.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: D88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157599 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.5 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.9 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68219 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68219 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155539 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-68219 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68219 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155540 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00014 0.00020 0.0001500 | 0 92.6 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68219 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68219 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155541 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0052 0.00020 0.005000 | 0 104 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156950 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156953 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68190 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156956 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 104 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-68190 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156958 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 112 70 130 7.41 20 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2206866-010BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: Trip Blank | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157132 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.063 | 0.0094 0.09383 0 66.6 65 135 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2206866-010BMSD | SampType: MSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: Trip Blank | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157134 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.079 | 0.0094 0.09409 0 83.7 65 135 22.9 20 R |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68185 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168760 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.018 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.034 | | 0.03750 | | 90.2 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68185 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168761 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 92.4 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 106 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68185 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68185 | | RunNo: 89114 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3168763 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 90.2 | 31.7 | 75.4 | 2.40 | 20 | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160360 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 96.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160361 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55 | 0.050 | 0.5000 | 0 | 109 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: 100ng lcs 2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R89027 | | RunNo: 89027 | | | | | | | |
| Prep Date: | Analysis Date: 6/25/2022 | | SeqNo: 3161605 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 92.1 | 70 | 130 | | | |
| Toluene | 24 | 1.0 | 20.00 | 0 | 122 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 95.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 97.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.7 | | 10.00 | | 86.6 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.1 | | 10.00 | | 90.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 12 | | 10.00 | | 118 | 70 | 130 | | | |

| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89027 | | RunNo: 89027 | | | | | | | |
| Prep Date: | Analysis Date: 6/25/2022 | | SeqNo: 3161606 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb 2 | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89027 | RunNo: 89027 | | | | | | | | |
| Prep Date: | Analysis Date: 6/25/2022 | SeqNo: 3161606 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 87.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | | | |

| Sample ID: 2206866-001ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: EB-6-15-22 | Batch ID: R89027 | RunNo: 89027 | | | | | | | | |
| Prep Date: | Analysis Date: 6/25/2022 | SeqNo: 3161612 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.4 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.8 | 70 | 130 | | | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| 1,1-Dichloroethene | 15 | 1.0 | 20.00 | 0 | 74.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 81.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.2 | | 10.00 | | 92.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.1 | | 10.00 | | 91.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 92.0 | 70 | 130 | | | |

| Sample ID: 2206866-001amsd | SampType: MSD | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: EB-6-15-22 | Batch ID: R89027 | RunNo: 89027 | | | | | | | | |
| Prep Date: | Analysis Date: 6/25/2022 | SeqNo: 3161613 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 16 | 1.0 | 20.00 | 0 | 80.1 | 70 | 130 | 12.1 | 20 | |
| Toluene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | 14.4 | 20 | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | 4.25 | 20 | |
| 1,1-Dichloroethene | 15 | 1.0 | 20.00 | 0 | 74.6 | 70 | 130 | 0.525 | 20 | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 80.9 | 70 | 130 | 0.628 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 86.8 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 8.5 | | 10.00 | | 85.1 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 93.1 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 111 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: W89041 | | | RunNo: 89041 | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | | SeqNo: 3163698 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 91.2 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 109 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 83.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 91.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: W89041 | | | RunNo: 89041 | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | | SeqNo: 3163699 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: W89041 | | | RunNo: 89041 | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | | SeqNo: 3163699 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: W89041 | | RunNo: 89041 | | | | | | | |
| Prep Date: | Analysis Date: 6/27/2022 | | SeqNo: 3163699 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68202 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68202 | RunNo: 89133 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167345 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 56.8 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 63.8 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.9 | 48 | 155 | | | |

| Sample ID: lcs-68202 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68202 | RunNo: 89133 | | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | SeqNo: 3167346 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68202 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68202 | | RunNo: 89133 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3167346 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 74 | 10 | 100.0 | 0 | 73.9 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 65 | 5.0 | 100.0 | 0 | 64.8 | 15 | 89.8 | | | |
| Phenol | 90 | 20 | 200.0 | 0 | 44.8 | 17 | 61.1 | | | |
| Pyrene | 91 | 10 | 100.0 | 0 | 90.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 57.1 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 83.6 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 80 | | 100.0 | | 80.3 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.5 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-68202 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68202 | | RunNo: 89133 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3167347 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 50 | 10 | 100.0 | 0 | 49.9 | 21.3 | 104 | 38.7 | 45.3 | |
| 1,4-Dichlorobenzene | 40 | 5.0 | 100.0 | 0 | 40.1 | 15 | 89.8 | 47.0 | 39.6 | R |
| Phenol | 52 | 20 | 200.0 | 0 | 26.2 | 17 | 61.1 | 52.4 | 42.5 | R |
| Pyrene | 68 | 10 | 100.0 | 0 | 67.9 | 61 | 123 | 28.9 | 11.8 | R |
| Surr: 2-Fluorophenol | 66 | | 200.0 | | 33.0 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 52 | | 200.0 | | 26.0 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 66.7 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 43 | | 100.0 | | 43.1 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 49.9 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 72.6 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68218 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 68218 | | RunNo: 89168 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | | SeqNo: 3169239 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: mb-68218 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68218 | | | RunNo: 89168 | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | | | SeqNo: 3169239 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 97 | | 200.0 | | 48.6 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 69.8 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 64.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 80.4 | 48 | 155 | | | |

| Sample ID: lcs-68218 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68218 | | | RunNo: 89168 | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | | | SeqNo: 3169240 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 72 | 10 | 100.0 | 0 | 72.2 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 64 | 5.0 | 100.0 | 0 | 64.4 | 15 | 89.8 | | | |
| Phenol | 89 | 20 | 200.0 | 0 | 44.5 | 17 | 61.1 | | | |
| Pyrene | 86 | 10 | 100.0 | 0 | 86.2 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 41.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 76.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.5 | 36.9 | 103 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-68218 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSW | Batch ID: 68218 | RunNo: 89168 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | SeqNo: 3169240 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 73 | | 100.0 | | 73.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 91.2 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: lcsd-68218 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68218 | RunNo: 89168 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | SeqNo: 3169241 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 75 | 10 | 100.0 | 0 | 74.8 | 21.3 | 104 | 3.65 | 45.3 | |
| 1,4-Dichlorobenzene | 63 | 5.0 | 100.0 | 0 | 63.2 | 15 | 89.8 | 1.81 | 39.6 | |
| Phenol | 88 | 20 | 200.0 | 0 | 44.2 | 17 | 61.1 | 0.867 | 42.5 | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.4 | 61 | 123 | 0.990 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 55.2 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 42.2 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 80.3 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 72 | | 100.0 | | 71.8 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.5 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.0 | 48 | 155 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: mb-68202 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: PBW | | Batch ID: 68202 | | RunNo: 89096 | | | | | | |
| Prep Date: 6/17/2022 | | Analysis Date: 6/28/2022 | | SeqNo: 3165504 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 78.5 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.3 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 75.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 107 | 72.3 | 147 | | | |

| Sample ID: lcs-68202 If | SampType: LCS | | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSW | Batch ID: 68202 | | | RunNo: 89096 | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | | SeqNo: 3165505 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.78 | 0.10 | 2.000 | 0 | 39.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 105 | 52.9 | 123 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | | | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 76.3 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon
Project: 2022 GW Sampling 2nd Qtr

| Sample ID: lcs-68202 lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68202 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3165505 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 90.6 | 72.3 | 147 | | | |

| Sample ID: lcsd-68202 lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68202 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/17/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3165506 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | 2.53 | 30.1 | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 21.3 | 79.9 | 2.78 | 25.6 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 22.2 | 80.3 | 1.38 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 20.6 | 80.1 | 2.78 | 25 | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 33.3 | 86 | 0 | 26.4 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 38.2 | 93.9 | 0 | 27.9 | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 41.1 | 95.6 | 0 | 25.6 | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 103 | 52.9 | 123 | 1.92 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | 0 | 24.1 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 55.3 | 115 | 0 | 20 | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 44.4 | 136 | 0 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 31.4 | 165 | 5.71 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 78.7 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.6 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 74 | | 100.0 | | 73.7 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 93.1 | 72.3 | 147 | 0 | 0 | |

| Sample ID: mb-68218 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68218 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/28/2022 | | SeqNo: 3165520 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68218 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 68218 | RunNo: 89096 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/28/2022 | SeqNo: 3165520 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 77.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 87.5 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68218 lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 68218 | RunNo: 89096 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/29/2022 | SeqNo: 3165521 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 22.2 | 80.3 | | | S |
| 2-Methylnaphthalene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 20.6 | 80.1 | | | S |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 33.3 | 86 | | | S |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 38.2 | 93.9 | | | S |
| Anthracene | 2.5 | 0.30 | 2.000 | 0 | 127 | 41.1 | 95.6 | | | S |
| Fluoranthene | 3.2 | 0.30 | 2.000 | 0 | 158 | 52.9 | 123 | | | S |
| Pyrene | 2.0 | 1.0 | 2.000 | 0 | 101 | 51 | 113 | | | |
| Benz(a)anthracene | 3.4 | 0.30 | 2.000 | 0 | 170 | 51 | 147 | | | S |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.4 | 0.30 | 2.000 | 0 | 118 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 3.2 | 0.30 | 2.000 | 0 | 162 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.2 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 74 | | 100.0 | | 74.2 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206866

15-Aug-22

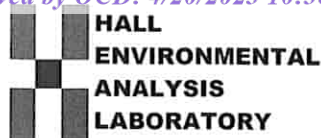
Client: Marathon

Project: 2022 GW Sampling 2nd Qtr

| Sample ID: Icsd-68218 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68218 | | | RunNo: 89096 | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/29/2022 | | | SeqNo: 3165522 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 0.10 | 2.000 | 0 | 43.0 | 20.2 | 48.4 | 9.76 | 30.1 | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 21.3 | 79.9 | 2.78 | 25.6 | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 20.6 | 80.1 | 1.36 | 25 | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 33.3 | 86 | 8.28 | 26.4 | S |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 38.2 | 93.9 | 1.18 | 27.9 | |
| Anthracene | 2.0 | 0.30 | 2.000 | 0 | 102 | 41.1 | 95.6 | 12.5 | 25.6 | S |
| Fluoranthene | 2.4 | 0.30 | 2.000 | 0 | 120 | 52.9 | 123 | 13.3 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.8 | 0.30 | 2.000 | 0 | 141 | 51 | 147 | 33.1 | 24.1 | R |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 55.3 | 115 | 2.41 | 20 | |
| Benzo(b)fluoranthene | 2.3 | 0.30 | 2.000 | 0 | 116 | 44.4 | 136 | 28.6 | 24.5 | R |
| Indeno(1,2,3-cd)pyrene | 3.3 | 0.30 | 2.000 | 0 | 166 | 31.4 | 165 | 59.4 | 21.1 | RS |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 77.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 68.5 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 76 | | 100.0 | | 75.7 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206866**RcptNo: **1**Received By: **Cheyenne Cason** 6/16/2022 7:20:00 AMCompleted By: **Cheyenne Cason** 6/16/2022 8:06:41 AMReviewed By: **KPG** 6.16.22*Chad**Chad***Chain of Custody**

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 16 8
6 or 12 unless noted)

Adjusted? NOChecked by: sm 6/16/22**Special Handling (if applicable)**

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.1 | Good | Yes | | | |
| 2 | 1.7 | Good | Yes | | | |
| 3 | 3.6 | Good | Yes | | | |
| 4 | 1.5 | Good | Yes | | | |



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Released to Imaging: 8/14/2026 5:09:31 PM



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 14, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2206938

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 6/17/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2206938
Date: 7/14/2022

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Quarter

Analytical Notes Regarding sample MKTF-32. The 8270 LCSD had low recoveries for the phenol spikes. The LCS had acceptable recoveries for all compounds.

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:30:00 AM

Lab ID: 2206938-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 7:50:58 PM | G88994 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 7:50:58 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Toluene | 0.43 | 0.20 | 1.0 | J | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Acetone | 3.4 | 2.5 | 10 | J | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Xylenes, Total | 0.41 | 0.37 | 1.5 | J | µg/L | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 96.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Surr: Dibromofluoromethane | 99.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 9:43:00 PM | R89017 |
| Surr: Toluene-d8 | 98.8 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 9:43:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:30:00 AM

Lab ID: 2206938-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/21/2022 11:57:26 AM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:30:00 AM

Lab ID: 2206938-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.039 | 0.016 | 0.064 | J | mg/L | 1 | 7/5/2022 11:58:09 AM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 11:58:09 AM | 68262 |
| Surr: DNOP | 95.5 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 11:58:09 AM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: 2-Fluorophenol | 59.6 | 0 | 29.4-87.7 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: Phenol-d5 | 44.4 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 75.0 | 0 | 18.6-129 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 67.2 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 86.7 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 4:48:22 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 3:20:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206938**Date Reported: **7/14/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** EB-6-16-22**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022 8:30:00 AM**Lab ID:** 2206938-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.7 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 69.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 3:20:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 93.6 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 3:20:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:30:00 AM

Lab ID: 2206938-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 3:15:43 PM | 68213 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 6/23/2022 4:47:49 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 5:32:02 PM | 68213 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 6/20/2022 5:32:02 PM | 68213 |
| Lead | 0.000065 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 5:32:02 PM | 68213 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 6/20/2022 5:32:02 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:16:45 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:30:00 AM

Lab ID: 2206938-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| Zinc | 0.0058 | 0.0032 | 0.010 | J | mg/L | 1 | 6/20/2022 7:20:15 PM | C88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 2:04:53 PM | C88918 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 2:04:53 PM | C88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 2:04:53 PM | C88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 2:04:53 PM | C88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:23:14 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 8:14:35 PM | G88994 |
| Surr: BFB | 145 | 0 | 70-130 | S | %Rec | 1 | 6/23/2022 8:14:35 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Toluene | 0.24 | 0.20 | 1.0 | J | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | 0.43 | 0.39 | 1.0 | J | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:06:00 PM | R89017 |
| Surr: Toluene-d8 | 99.7 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:06:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 6/21/2022 12:12:27 PM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.082 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 12:21:59 PM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 12:21:59 PM | 68262 |
| Surr: DNOP | 76.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 12:21:59 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: 2-Fluorophenol | 30.8 | 0 | 29.4-87.7 | | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: Phenol-d5 | 38.5 | 0 | 28.5-64.7 | | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 11.2 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: Nitrobenzene-d5 | 62.5 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 68.7 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 83.0 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 5:30:57 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.24 | 0.11 | 1.0 | J | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 4:04:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 73.8 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 67.0 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 4:04:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 89.1 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 4:04:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 1.4 | 0.0079 | 0.015 | | mg/L | 5 | 6/28/2022 3:24:20 PM | 68301 |
| Beryllium | 0.0011 | 0.00088 | 0.0020 | J | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Chromium | 0.059 | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Cobalt | 0.020 | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Nickel | 0.077 | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Vanadium | 0.091 | 0.0035 | 0.050 | | mg/L | 1 | 6/20/2022 3:17:21 PM | 68213 |
| Zinc | 0.12 | 0.0039 | 0.010 | | mg/L | 1 | 6/23/2022 4:49:27 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/20/2022 5:34:29 PM | 68213 |
| Arsenic | 0.0077 | 0.0013 | 0.010 | J | mg/L | 10 | 6/20/2022 5:34:29 PM | 68213 |
| Lead | 0.023 | 0.00061 | 0.0050 | * | mg/L | 10 | 6/20/2022 5:34:29 PM | 68213 |
| Selenium | 0.023 | 0.0037 | 0.010 | | mg/L | 10 | 6/20/2022 5:34:29 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:29:37 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 8:45:00 AM

Lab ID: 2206938-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.030 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Chromium | 0.0054 | 0.0020 | 0.0060 | J | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Nickel | 0.0037 | 0.0033 | 0.010 | J | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Silver | 0.0029 | 0.0013 | 0.0050 | J | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Vanadium | 0.012 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 6/21/2022 7:02:42 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 2:07:35 PM | C88918 |
| Arsenic | 0.0014 | 0.00061 | 0.0050 | J | mg/L | 5 | 6/21/2022 3:41:42 PM | C88918 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 6/21/2022 3:41:42 PM | C88918 |
| Selenium | 0.016 | 0.0017 | 0.0050 | | mg/L | 5 | 6/21/2022 3:41:42 PM | C88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:31:46 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:15:00 AM

Lab ID: 2206938-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.95 | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 9:24:35 AM | A89029 |
| Surr: BFB | 3120 | 0 | 70-130 | S | %Rec | 1 | 6/24/2022 9:24:35 AM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 7.0 | 0.23 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Toluene | 1.0 | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Ethylbenzene | 5.0 | 0.21 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | 0.71 | 0.39 | 1.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | 2.1 | 0.12 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | 0.27 | 0.18 | 1.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Acetone | 9.8 | 2.5 | 10 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Isopropylbenzene | 1.4 | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 4-Isopropyltoluene | 0.29 | 0.20 | 1.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| n-Butylbenzene | 0.67 | 0.25 | 3.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| n-Propylbenzene | 2.3 | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| sec-Butylbenzene | 0.65 | 0.14 | 1.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Styrene | 0.14 | 0.14 | 1.0 | J | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Xylenes, Total | 4.1 | 0.37 | 1.5 | | µg/L | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:29:00 PM | R89017 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:29:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:15:00 AM

Lab ID: 2206938-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/21/2022 5:47:07 PM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:15:00 AM

Lab ID: 2206938-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.4 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 12:45:49 PM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 12:45:49 PM | 68262 |
| Surr: DNOP | 76.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 12:45:49 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: 2-Fluorophenol | 2.09 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: Phenol-d5 | 10.4 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 2.60 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: Nitrobenzene-d5 | 62.3 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 68.3 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 87.0 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 6:15:13 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 6.5 | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Acenaphthene | 0.58 | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 4:47:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-68**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022 9:15:00 AM**Lab ID:** 2206938-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 72.8 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 63.3 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 4:47:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 78.9 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 4:47:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:15:00 AM

Lab ID: 2206938-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.25 | 0.0079 | 0.015 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Cobalt | 0.093 | 0.018 | 0.030 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Nickel | 0.18 | 0.027 | 0.050 | * | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Vanadium | 0.024 | 0.018 | 0.25 | J | mg/L | 5 | 6/20/2022 3:56:26 PM | 68213 |
| Zinc | 0.039 | 0.019 | 0.050 | J | mg/L | 5 | 6/23/2022 4:50:57 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 6/20/2022 6:45:24 PM | 68213 |
| Arsenic | 0.020 | 0.0025 | 0.020 | J* | mg/L | 20 | 6/20/2022 6:45:24 PM | 68213 |
| Lead | 0.018 | 0.0012 | 0.010 | * | mg/L | 20 | 6/20/2022 6:45:24 PM | 68213 |
| Selenium | 0.016 | 0.0074 | 0.020 | J | mg/L | 20 | 6/20/2022 6:45:24 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:33:54 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:15:00 AM

Lab ID: 2206938-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.056 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Cadmium | 0.0020 | 0.00098 | 0.0020 | J | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Cobalt | 0.065 | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Nickel | 0.17 | 0.0033 | 0.010 | * | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Silver | 0.011 | 0.0013 | 0.0050 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Vanadium | 0.012 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 6/21/2022 7:05:02 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/21/2022 2:10:16 PM | C88918 |
| Arsenic | 0.010 | 0.0012 | 0.010 | * | mg/L | 10 | 6/21/2022 2:10:16 PM | C88918 |
| Lead | 0.0060 | 0.00057 | 0.0050 | | mg/L | 10 | 6/21/2022 2:10:16 PM | C88918 |
| Selenium | 0.0075 | 0.0034 | 0.010 | J | mg/L | 10 | 6/21/2022 2:10:16 PM | C88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:36:03 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:45:00 AM

Lab ID: 2206938-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.27 | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 10:11:38 AM | A89029 |
| Surr: BFB | 1310 | 0 | 70-130 | S | %Rec | 1 | 6/24/2022 10:11:38 AM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | 36 | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | 0.14 | 0.12 | 1.0 | J | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 109 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:52:00 PM | R89017 |
| Surr: Toluene-d8 | 96.9 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:52:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2206938-004B

Client Sample ID: OW-67

Collection Date: 6/16/2022 9:45:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: JME | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 6/21/2022 1:01:08 PM | 68190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:45:00 AM

Lab ID: 2206938-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.77 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 2:45:23 PM | 68262 |
| Motor Oil Range Organics (MRO) | 0.97 | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 2:45:23 PM | 68262 |
| Surr: DNOP | 78.2 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 2:45:23 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: 2-Fluorophenol | 1.47 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: Phenol-d5 | 9.05 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: Nitrobenzene-d5 | 59.9 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 64.7 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 87.1 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 6:59:20 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.8 | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 5:31:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical ReportLab Order: **2206938**Date Reported: **7/14/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-67**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022 9:45:00 AM**Lab ID:** 2206938-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.6 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 59.2 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 5:31:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 77.9 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 5:31:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:45:00 AM

Lab ID: 2206938-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.60 | 0.0079 | 0.015 | | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Chromium | 0.014 | 0.0098 | 0.030 | J | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Cobalt | 0.029 | 0.018 | 0.030 | J | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Nickel | 0.14 | 0.027 | 0.050 | * | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Vanadium | 0.042 | 0.018 | 0.25 | J | mg/L | 5 | 6/20/2022 3:57:53 PM | 68213 |
| Zinc | 0.035 | 0.019 | 0.050 | J | mg/L | 5 | 6/23/2022 4:52:21 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/20/2022 5:39:21 PM | 68213 |
| Arsenic | 0.0063 | 0.0013 | 0.010 | J | mg/L | 10 | 6/20/2022 5:39:21 PM | 68213 |
| Lead | 0.011 | 0.00061 | 0.0050 | | mg/L | 10 | 6/20/2022 5:39:21 PM | 68213 |
| Selenium | ND | 0.0037 | 0.010 | | mg/L | 10 | 6/20/2022 5:39:21 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:38:11 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 9:45:00 AM

Lab ID: 2206938-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.054 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Nickel | 0.12 | 0.0033 | 0.010 | * | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Silver | 0.020 | 0.0013 | 0.0050 | | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Vanadium | 0.0055 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| Zinc | 0.0072 | 0.0032 | 0.010 | J | mg/L | 1 | 6/21/2022 7:07:22 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 6/21/2022 3:44:23 PM | C88918 |
| Arsenic | 0.0027 | 0.0024 | 0.020 | J | mg/L | 20 | 6/23/2022 12:45:36 PM | A88981 |
| Lead | ND | 0.00057 | 0.0050 | | mg/L | 10 | 6/23/2022 11:24:53 AM | A88981 |
| Selenium | ND | 0.0069 | 0.020 | | mg/L | 20 | 6/23/2022 12:45:36 PM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:40:20 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/23/2022 9:25:28 PM | G88994 |
| Surr: BFB | 97.8 | 0 | 70-130 | | %Rec | 1 | 6/23/2022 9:25:28 PM | G88994 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 98.6 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:15:00 PM | R89017 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:15:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 6/24/2022 2:17:45 AM | 68319 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.15 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 2:21:25 PM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 2:21:25 PM | 68262 |
| Surr: DNOP | 93.7 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 2:21:25 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: 2-Fluorophenol | 1.31 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: Phenol-d5 | 8.24 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 2.35 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: Nitrobenzene-d5 | 60.9 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 64.0 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 84.4 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 7:42:52 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 6:15:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.7 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 63.8 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 6:15:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 81.8 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 6:15:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.077 | 0.0079 | 0.015 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Cobalt | 0.031 | 0.018 | 0.030 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Nickel | ND | 0.027 | 0.050 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Vanadium | ND | 0.018 | 0.25 | | mg/L | 5 | 6/20/2022 3:59:16 PM | 68213 |
| Zinc | 0.021 | 0.019 | 0.050 | J | mg/L | 5 | 6/23/2022 4:58:45 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 6/20/2022 6:47:51 PM | 68213 |
| Arsenic | 0.0034 | 0.0025 | 0.020 | J | mg/L | 20 | 6/20/2022 6:47:51 PM | 68213 |
| Lead | 0.0022 | 0.0012 | 0.010 | J | mg/L | 20 | 6/20/2022 6:47:51 PM | 68213 |
| Selenium | ND | 0.0074 | 0.020 | | mg/L | 20 | 6/20/2022 6:47:51 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:42:28 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:10:00 AM

Lab ID: 2206938-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.040 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Nickel | 0.0064 | 0.0033 | 0.010 | J | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Silver | 0.037 | 0.0013 | 0.0050 | | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Vanadium | 0.0067 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| Zinc | 0.0074 | 0.0032 | 0.010 | J | mg/L | 1 | 6/21/2022 7:09:54 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/21/2022 3:47:05 PM | C88918 |
| Arsenic | ND | 0.0061 | 0.050 | | mg/L | 50 | 6/23/2022 12:53:40 PM | A88981 |
| Lead | ND | 0.0011 | 0.010 | | mg/L | 20 | 6/23/2022 11:27:34 AM | A88981 |
| Selenium | ND | 0.017 | 0.050 | | mg/L | 50 | 6/23/2022 12:53:40 PM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:44:37 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:45:00 AM

Lab ID: 2206938-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.038 | 0.0090 | 0.050 | J | mg/L | 1 | 6/24/2022 10:35:08 AM | A89029 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 10:35:08 AM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 0.28 | 0.23 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Toluene | 0.21 | 0.20 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Ethylbenzene | 0.83 | 0.21 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Methyl tert-butyl ether (MTBE) | 0.65 | 0.39 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,2,4-Trimethylbenzene | 1.6 | 0.12 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,3,5-Trimethylbenzene | 0.98 | 0.18 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,2-Dichloroethane (EDC) | 3.0 | 0.25 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Acetone | 3.2 | 2.5 | 10 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,1-Dichloroethane | 3.2 | 0.27 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,1-Dichloroethene | 5.0 | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Isopropylbenzene | 0.30 | 0.18 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 4-Isopropyltoluene | 0.26 | 0.20 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| n-Butylbenzene | 0.26 | 0.25 | 3.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| n-Propylbenzene | 0.35 | 0.18 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| sec-Butylbenzene | 0.18 | 0.14 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Styrene | 0.21 | 0.14 | 1.0 | J | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Xylenes, Total | 6.9 | 0.37 | 1.5 | | µg/L | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Surr: 4-Bromofluorobenzene | 93.6 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:38:00 PM | R89017 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:38:00 PM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:45:00 AM

Lab ID: 2206938-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/24/2022 2:48:17 AM | 68319 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:45:00 AM

Lab ID: 2206938-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.9 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 1:57:31 PM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 1:57:31 PM | 68262 |
| Surr: DNOP | 85.3 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 1:57:31 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: 2-Fluorophenol | 6.97 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: Phenol-d5 | 15.1 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 11.4 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: Nitrobenzene-d5 | 32.5 | 0 | 36.9-103 | S | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 31.5 | 0 | 38.1-99.9 | S | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 56.0 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 8:26:25 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.3 | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Naphthalene | 0.28 | 0.20 | 0.30 | J | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| 1-Methylnaphthalene | 0.40 | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| 2-Methylnaphthalene | 0.28 | 0.14 | 0.30 | J | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 7:00:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical ReportLab Order: **2206938**Date Reported: **7/14/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** MKTF-41**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022 10:45:00 AM**Lab ID:** 2206938-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 37.3 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 31.7 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 7:00:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 57.9 | 0 | 72.3-147 | S | %Rec | 1 | 6/29/2022 7:00:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:45:00 AM

Lab ID: 2206938-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.069 | 0.0016 | 0.0030 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Vanadium | 0.028 | 0.0035 | 0.050 | J | mg/L | 1 | 6/20/2022 3:23:02 PM | 68213 |
| Zinc | 0.016 | 0.0039 | 0.010 | | mg/L | 1 | 6/23/2022 5:00:29 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/20/2022 5:49:09 PM | 68213 |
| Arsenic | 0.0025 | 0.00063 | 0.0050 | J | mg/L | 5 | 6/20/2022 6:50:18 PM | 68213 |
| Lead | 0.00011 | 0.000061 | 0.00050 | J | mg/L | 1 | 6/20/2022 5:49:09 PM | 68213 |
| Selenium | 0.033 | 0.0019 | 0.0050 | | mg/L | 5 | 6/20/2022 6:50:18 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:46:47 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 10:45:00 AM

Lab ID: 2206938-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.063 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Vanadium | 0.027 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| Zinc | 0.0075 | 0.0032 | 0.010 | J | mg/L | 1 | 6/21/2022 7:12:20 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 2:23:43 PM | C88918 |
| Arsenic | 0.0020 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 2:23:43 PM | C88918 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 6/21/2022 2:23:43 PM | C88918 |
| Selenium | 0.033 | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 2:23:43 PM | C88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:48:56 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/15/2022 10:45:00 AM

Lab ID: 2206938-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Toluene | 0.24 | 0.20 | 1.0 | J | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Acetone | 3.6 | 2.5 | 10 | J | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 96.6 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Surr: 4-Bromofluorobenzene | 92.0 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:01:00 AM | R89017 |
| Surr: Toluene-d8 | 109 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:01:00 AM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022

Lab ID: 2206938-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 11:45:53 AM | A89029 |
| Surr: BFB | 100 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 11:45:53 AM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Surr: 4-Bromofluorobenzene | 112 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:25:00 AM | R89017 |
| Surr: Toluene-d8 | 96.9 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 12:25:00 AM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022

Lab ID: 2206938-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 6/24/2022 3:18:37 AM | 68319 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022

Lab ID: 2206938-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.15 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 1:33:37 PM | 68262 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 1:33:37 PM | 68262 |
| Surr: DNOP | 91.4 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 1:33:37 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: 2-Fluorophenol | 1.27 | 0 | 29.4-87.7 | S | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: Phenol-d5 | 7.83 | 0 | 28.5-64.7 | S | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: 2,4,6-Tribromophenol | 2.30 | 0 | 18.6-129 | S | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: Nitrobenzene-d5 | 52.2 | 0 | 36.9-103 | | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 38.1-99.9 | | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| Surr: 4-Terphenyl-d14 | 79.9 | 0 | 48-155 | | %Rec | 1 | 6/30/2022 9:10:10 PM | 68218 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 6/29/2022 7:44:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical ReportLab Order: **2206938**Date Reported: **7/14/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** DUP-6-16-22**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022**Lab ID:** 2206938-008C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.6 | 0 | 31.6-100 | | %Rec | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Surr: 2-Fluorobiphenyl | 49.8 | 0 | 26.7-90.1 | | %Rec | 1 | 6/29/2022 7:44:00 AM | 68218 |
| Surr: 4-Terphenyl-d14 | 74.3 | 0 | 72.3-147 | | %Rec | 1 | 6/29/2022 7:44:00 AM | 68218 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022

Lab ID: 2206938-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.071 | 0.0079 | 0.015 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Cobalt | 0.028 | 0.018 | 0.030 | J | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Nickel | ND | 0.027 | 0.050 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Vanadium | ND | 0.018 | 0.25 | | mg/L | 5 | 6/20/2022 4:00:57 PM | 68213 |
| Zinc | 0.022 | 0.019 | 0.050 | J | mg/L | 5 | 6/23/2022 5:02:09 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 6/20/2022 6:52:44 PM | 68213 |
| Arsenic | 0.0034 | 0.0025 | 0.020 | J | mg/L | 20 | 6/20/2022 6:52:44 PM | 68213 |
| Lead | 0.0022 | 0.0012 | 0.010 | J | mg/L | 20 | 6/20/2022 6:52:44 PM | 68213 |
| Selenium | ND | 0.0074 | 0.020 | | mg/L | 20 | 6/20/2022 6:52:44 PM | 68213 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:55:22 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-16-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022

Lab ID: 2206938-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.040 | 0.0011 | 0.0020 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Nickel | 0.0042 | 0.0033 | 0.010 | J | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Silver | 0.035 | 0.0013 | 0.0050 | | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Vanadium | 0.0057 | 0.0017 | 0.050 | J | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| Zinc | 0.0055 | 0.0032 | 0.010 | J | mg/L | 1 | 6/21/2022 7:14:38 PM | A88936 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0044 | 0.010 | | mg/L | 10 | 6/21/2022 3:49:46 PM | C88918 |
| Arsenic | ND | 0.0024 | 0.020 | | mg/L | 20 | 6/23/2022 11:30:16 AM | A88981 |
| Lead | ND | 0.0011 | 0.010 | | mg/L | 20 | 6/23/2022 11:30:16 AM | A88981 |
| Selenium | ND | 0.0069 | 0.020 | | mg/L | 20 | 6/23/2022 11:30:16 AM | A88981 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/20/2022 12:57:31 PM | 68220 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206938-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1-Methylnaphthalene | 1.0 | 0.84 | 4.0 | J | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 2-Methylnaphthalene | 1.0 | 0.69 | 4.0 | J | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Acetone | 2.7 | 2.5 | 10 | J | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206938-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Styrene | 0.14 | 0.14 | 1.0 | J | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2,3-Trichlorobenzene | 0.25 | 0.25 | 1.0 | J | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Surr: 4-Bromofluorobenzene | 97.7 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 1:56:00 AM | R89017 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 6/25/2022 1:56:00 AM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2206938-009B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 6/24/2022 3:49:00 AM | 68319 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 11:05:00 AM

Lab ID: 2206938-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.97 | 0.0090 | 0.050 | | mg/L | 1 | 6/24/2022 12:09:31 PM | A89029 |
| Surr: BFB | 96.2 | 0 | 70-130 | | %Rec | 1 | 6/24/2022 12:09:31 PM | A89029 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.45 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Ethylbenzene | ND | 0.43 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Methyl tert-butyl ether (MTBE) | 1100 | 7.9 | 20 | | µg/L | 20 | 6/25/2022 2:19:00 AM | R89017 |
| 1,2,4-Trimethylbenzene | ND | 0.24 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 1,2-Dichloroethane (EDC) | 11 | 0.51 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| cis-1,2-DCE | 2.1 | 0.78 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 1,1-Dichloroethane | 11 | 0.55 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 1,1-Dichloroethene | 19 | 0.40 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Isopropylbenzene | ND | 0.37 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| n-Propylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| sec-Butylbenzene | 0.44 | 0.29 | 2.0 | J | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Xylenes, Total | ND | 0.74 | 3.0 | | µg/L | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Surr: Dibromofluoromethane | 105 | 0 | 70-130 | | %Rec | 2 | 6/25/2022 2:42:00 AM | R89017 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 2 | 6/25/2022 2:42:00 AM | R89017 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 11:05:00 AM

Lab ID: 2206938-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 6/24/2022 4:19:11 AM | 68319 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 11:05:00 AM

Lab ID: 2206938-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 1.2 | 0.016 | 0.064 | | mg/L | 1 | 7/5/2022 1:09:42 PM | 68262 |
| Motor Oil Range Organics (MRO) | 1.2 | 0.052 | 0.080 | | mg/L | 1 | 7/5/2022 1:09:42 PM | 68262 |
| Surr: DNOP | 77.1 | 0 | 42.2-138 | | %Rec | 1 | 7/5/2022 1:09:42 PM | 68262 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: 2-Fluorophenol | 56.3 | 0 | 29.4-87.7 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: Phenol-d5 | 43.0 | 0 | 28.5-64.7 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: 2,4,6-Tribromophenol | 55.3 | 0 | 18.6-129 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: Nitrobenzene-d5 | 69.1 | 0 | 36.9-103 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: 2-Fluorobiphenyl | 66.0 | 0 | 38.1-99.9 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| Surr: 4-Terphenyl-d14 | 83.6 | 0 | 48-155 | | %Rec | 1 | 7/6/2022 2:41:16 PM | 68278 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 63 | 0.11 | 1.0 | E | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/5/2022 2:06:00 PM | 68278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical ReportLab Order: **2206938**Date Reported: **7/14/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** MKTF-32**Project:** 2022 GW Sampling 2nd Quarter**Collection Date:** 6/16/2022 11:05:00 AM**Lab ID:** 2206938-010C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 80.4 | 0 | 31.6-100 | | %Rec | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Surr: 2-Fluorobiphenyl | 75.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/5/2022 2:06:00 PM | 68278 |
| Surr: 4-Terphenyl-d14 | 100 | 0 | 72.3-147 | | %Rec | 1 | 7/5/2022 2:06:00 PM | 68278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 11:05:00 AM

Lab ID: 2206938-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: JLF | |
| Barium | 0.074 | 0.0016 | 0.0030 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Vanadium | 0.0085 | 0.0035 | 0.050 | J | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| Zinc | 0.011 | 0.0039 | 0.010 | | mg/L | 1 | 6/23/2022 5:03:50 PM | 68301 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/27/2022 10:35:48 AM | 68301 |
| Arsenic | 0.0026 | 0.00013 | 0.0010 | | mg/L | 1 | 6/27/2022 10:35:48 AM | 68301 |
| Lead | 0.00097 | 0.000061 | 0.00050 | | mg/L | 1 | 6/27/2022 10:35:48 AM | 68301 |
| Selenium | 0.00052 | 0.00037 | 0.0010 | J | mg/L | 1 | 6/27/2022 10:35:48 AM | 68301 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/21/2022 11:28:36 AM | 68247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2206938

Date Reported: 7/14/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/16/2022 11:05:00 AM

Lab ID: 2206938-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JLF | |
| Barium | 0.045 | 0.0011 | 0.0020 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Nickel | 0.0038 | 0.0033 | 0.010 | J | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Vanadium | 0.0049 | 0.0017 | 0.050 | J | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| Zinc | 0.0087 | 0.0032 | 0.010 | J | mg/L | 1 | 6/20/2022 9:10:16 PM | C88897 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 6/21/2022 2:29:05 PM | C88918 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 6/21/2022 2:29:05 PM | C88918 |
| Lead | 0.000087 | 0.000057 | 0.00050 | J | mg/L | 1 | 6/21/2022 2:29:05 PM | C88918 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 6/21/2022 2:29:05 PM | C88918 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 6/23/2022 11:24:08 AM | 68304 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |



ANALYTICAL REPORT

July 01, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1506677

Samples Received: 06/18/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Sr: Sample Results | 5 |
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2206938-001F EB-6-16-22 L1506677-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:00 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2206938-002F OW-60 L1506677-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:02 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2206938-003F OW-68 L1506677-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:03 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2206938-004F OW-67 L1506677-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:06 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2206938-005F MKTF-43 L1506677-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:10 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2206938-006F MKTF-41 L1506677-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:11 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2206938-008F DUP-6-16-22 L1506677-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1886384 | 1 | 06/28/22 00:39 | 06/29/22 10:12 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/29/2022 10:00 | WG1886384 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0115 | | 0.00500 | 1 | 06/29/2022 10:02 | WG1886384 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0185 | | 0.00500 | 1 | 06/29/2022 10:03 | WG1886384 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0412 | | 0.00500 | 1 | 06/29/2022 10:06 | WG1886384 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/29/2022 10:10 | WG1886384 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00513 | | 0.00500 | 1 | 06/29/2022 10:11 | WG1886384 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/29/2022 10:12 | WG1886384 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3808789-1 06/29/22 09:45

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1506677-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1506677-01 06/29/22 10:00 • (DUP) R3808789-3 06/29/22 10:01

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1506677-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1506677-04 06/29/22 10:06 • (DUP) R3808789-6 06/29/22 10:07

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | 0.0412 | 0.0386 | 1 | 6.52 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3808789-2 06/29/22 09:46

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.104 | 104 | 87.1-120 | |

L1506677-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506677-03 06/29/22 10:03 • (MS) R3808789-4 06/29/22 10:04 • (MSD) R3808789-5 06/29/22 10:05

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.0185 | 0.111 | 0.113 | 92.5 | 94.5 | 1 | 90.0-110 | | | 1.79 | 20 |

L1506677-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506677-07 06/29/22 10:12 • (MS) R3808789-7 06/29/22 10:13 • (MSD) R3808789-8 06/29/22 10:14

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.101 | 0.102 | 97.5 | 98.5 | 1 | 90.0-110 | | | 0.985 | 20 |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

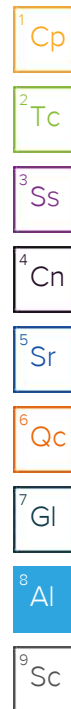
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

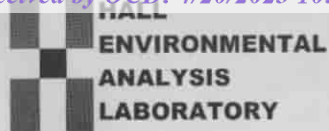
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

F200

| | | | | | | | |
|---|--------------|-------------------------|-------------|------------------------------|-----------------------|----------------------------|----------------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206938-001F | EB-6-16-22 | 500AMBHDP | Groundw | 6/16/2022 8:30:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 2 | 2206938-002F | OW-60 | 500AMBHDP | Groundw | 6/16/2022 8:45:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 3 | 2206938-003F | OW-68 | 500AMBHDP | Groundw | 6/16/2022 9:15:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 4 | 2206938-004F | OW-67 | 500AMBHDP | Groundw | 6/16/2022 9:45:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 5 | 2206938-005F | MKTF-43 | 500AMBHDP | Groundw | 6/16/2022 10:10:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 6 | 2206938-006F | MKTF-41 | 500AMBHDP | Groundw | 6/16/2022 10:45:00 AM | 1 | Total Cyanide J and MDL <i>W</i> |
| 7 | 2206938-008F | DUP-6-16-22 | 500AMBHDP | Groundw | 6/16/2022 | 1 | Total Cyanide J and MDL <i>W</i> |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 Lab Screened at 5 mg/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------------|----------------------|---------------------------------|----------------------|-------------------|---|--|
| Relinquished By: <i>cmc</i> | Date: 6/17/2022 | Time: 7:29 AM | Received By: <i>[Signature]</i> | Date: 6/16/22 | Time: 9:00 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples 1.0 to 1.0 Attempt to Cool? ☐ | |
| TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: PMA7 | |



ANALYTICAL REPORT

July 01, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1507386

Samples Received: 06/22/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|---|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2206938-010F MKTF-32 L1507386-01 | 5 | ⁴ Cn |
| Qc: Quality Control Summary | 6 | ⁵ Sr |
| Wet Chemistry by Method 4500CN E-2016 | 6 | ⁶ Qc |
| Gl: Glossary of Terms | 7 | ⁷ Gl |
| Al: Accreditations & Locations | 8 | ⁸ Al |
| Sc: Sample Chain of Custody | 9 | ⁹ Sc |

2206938-010F MKTF-32 L1507386-01 GW

Collected by
Collected date/time
Received date/time

06/16/22 11:05
06/22/22 09:45

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1886402 | 1 | 06/29/22 07:22 | 06/30/22 09:52 | LDT | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 06/30/2022 09:52 | WG1886402 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3809311-1 06/30/22 09:27

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1506624-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1506624-02 06/30/22 09:35 • (DUP) R3809311-3 06/30/22 09:36

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1506993-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1506993-01 06/30/22 09:45 • (DUP) R3809311-6 06/30/22 09:46

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3809311-2 06/30/22 09:28

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0964 | 96.4 | 87.1-120 | |

L1506949-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506949-02 06/30/22 09:40 • (MS) R3809311-4 06/30/22 09:41 • (MSD) R3809311-5 06/30/22 09:42

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.102 | 0.0991 | 102 | 99.1 | 1 | 90.0-110 | | | 2.88 | 20 |

L1507351-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507351-05 06/30/22 09:47 • (MS) R3809311-7 06/30/22 09:48 • (MSD) R3809311-8 06/30/22 09:51

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.102 | 0.103 | 102 | 103 | 1 | 90.0-110 | | | 0.976 | 20 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

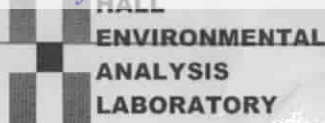
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1



J116

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

| | | | | | | | |
|--|--------------|------------------|-------------|-----------------------|-----------------------|---------------------|-------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2206938-010F | MKTF-32 | 500AMBHP | Groundw | 6/16/2022 11:05:00 AM | 1 | Total Cyanide J and MDL |

L1907386

-01

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Temp: 21 $\pm$ 0 = 2.1

FOX 575T 8093 3/35

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-----------------|---------------|--------------------------|---------------|------------|--|--|
| Relinquished By: Cme | Date: 6/20/2022 | Time: 9:09 AM | Received By: [Signature] | Date: 6/24/22 | Time: 0945 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-68213 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 68213 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157191 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |

| Sample ID: LCSLL-68213 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
|-------------------------------|---------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 68213 | | | RunNo: 88908 | | | | | | |
| Prep Date: 6/18/2022 | Analysis Date: 6/20/2022 | | | SeqNo: 3157192 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0017 | 0.0030 | 0.002000 | 0 | 86.6 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 103 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 87.2 | 50 | 150 | | | J |
| Chromium | 0.0053 | 0.0060 | 0.006000 | 0 | 89.0 | 50 | 150 | | | J |
| Cobalt | 0.0070 | 0.0060 | 0.006000 | 0 | 117 | 50 | 150 | | | |
| Nickel | 0.0027 | 0.010 | 0.005000 | 0 | 53.3 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 106 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 105 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|---|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: LCS-68213 | | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68213 | | | RunNo: 88908 | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3157193 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 85 | 115 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 107 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68301 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68301 | RunNo: 89044 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | SeqNo: 3162760 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68301 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68301 | RunNo: 89044 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | SeqNo: 3162761 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0030 | 0.002000 | 0 | 90.1 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 103 | 50 | 150 | | | |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Cobalt | 0.0055 | 0.0060 | 0.006000 | 0 | 91.3 | 50 | 150 | | | J |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 113 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.8 | 50 | 150 | | | J |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 97.5 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 137 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68301 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68301 | RunNo: 89044 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | SeqNo: 3162762 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 98.9 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.3 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.9 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.4 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.5 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: C88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156681 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: C88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156682 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 103 | 50 | 150 | | | |
| Beryllium | 0.0017 | 0.0020 | 0.002000 | 0 | 85.7 | 50 | 150 | | | J |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 103 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 96.1 | 50 | 150 | | | J |
| Cobalt | 0.0057 | 0.0060 | 0.006000 | 0 | 94.7 | 50 | 150 | | | J |
| Nickel | 0.0050 | 0.010 | 0.005000 | 0 | 99.5 | 50 | 150 | | | J |
| Silver | 0.0057 | 0.0050 | 0.005000 | 0 | 114 | 50 | 150 | | | |
| Vanadium | 0.0080 | 0.050 | 0.01000 | 0 | 80.2 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 110 | 50 | 150 | | | |

| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: C88897 | RunNo: 88897 | | | | | | | | |
| Prep Date: | Analysis Date: 6/20/2022 | SeqNo: 3156683 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.1 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.6 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 110 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2206938-001EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-6-16-22 | | Batch ID: C88897 | | RunNo: 88897 | | | | | | |
| Prep Date: | | Analysis Date: 6/20/2022 | | SeqNo: 3156685 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.8 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.0 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.005759 | 98.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|-------|----------|------|
| Sample ID: 2206938-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-6-16-22 | | Batch ID: C88897 | | RunNo: 88897 | | | | | | |
| Prep Date: | | Analysis Date: 6/20/2022 | | SeqNo: 3156686 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 0.539 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | 0.884 | 20 | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.7 | 70 | 130 | 0.375 | 20 | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | 0.443 | 20 | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.2 | 70 | 130 | 0.642 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 70 | 130 | 0.566 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 70 | 130 | 0.196 | 20 | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | 0.379 | 20 | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0.005759 | 97.7 | 70 | 130 | 0.335 | 20 | |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID: MB-A | | SampType: MBLK | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: A88936 | | | RunNo: 88936 | | | | | |
| Prep Date: | | Analysis Date: 6/21/2022 | | | SeqNo: 3158359 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: LL LCS-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
|----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A88936 | | RunNo: 88936 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3158360 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0020 | 0.002000 | 0 | 108 | 50 | 150 | | | |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 105 | 50 | 150 | | | |
| Cadmium | 0.0028 | 0.0020 | 0.002000 | 0 | 138 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | |
| Nickel | 0.0056 | 0.010 | 0.005000 | 0 | 113 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.5 | 50 | 150 | | | J |
| Vanadium | 0.0099 | 0.050 | 0.01000 | 0 | 99.5 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 108 | 50 | 150 | | | |

| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A88936 | | RunNo: 88936 | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | | SeqNo: 3158361 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.3 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 104 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68213 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68213 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155316 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68213 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68213 | | RunNo: 88865 | | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | SeqNo: 3155317 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 97.5 | 50 | 150 | | | J |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68213 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68213 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155318 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 93.2 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68213 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68213 | | | RunNo: 88865 | | | | | |
| Prep Date: 6/18/2022 | | Analysis Date: 6/20/2022 | | | SeqNo: 3155335 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68301 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68301 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/22/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162816 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-68301 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68301 | | RunNo: 89049 | | | | | | |
| Prep Date: 6/22/2022 | | Analysis Date: 6/27/2022 | | SeqNo: 3162817 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00099 | 0.0010 | 0.001000 | 0 | 98.6 | 50 | 150 | | | J |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.1 | 50 | 150 | | | J |
| Lead | 0.00043 | 0.00050 | 0.0005000 | 0 | 86.6 | 50 | 150 | | | J |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-68301 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68301 | | | RunNo: 89049 | | | | | |
| Prep Date: 6/22/2022 | | Analysis Date: 6/27/2022 | | | SeqNo: 3162818 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.4 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.0 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 93.7 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157563 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157564 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00099 | 0.0010 | 0.001000 | 0 | 98.5 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.9 | 50 | 150 | | | J |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C88918 | RunNo: 88918 | | | | | | | | |
| Prep Date: | Analysis Date: 6/21/2022 | SeqNo: 3157566 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A88981 | RunNo: 88981 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160067 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A88981 | RunNo: 88981 | | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160068 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|--------------------|--------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BatchQC | Batch ID: A88981 | RunNo: 88981 |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160068 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.00051 | 0.00050 0.0005000 0 102 50 150 |
| Selenium | 0.00099 | 0.0010 0.001000 0 98.6 50 150 J |

| | | |
|-----------------|--------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: LCSW | Batch ID: A88981 | RunNo: 88981 |
| Prep Date: | Analysis Date: 6/23/2022 | SeqNo: 3160069 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.024 | 0.0010 0.02500 0 97.4 85 115 |
| Lead | 0.012 | 0.00050 0.01250 0 98.6 85 115 |
| Selenium | 0.024 | 0.0010 0.02500 0 96.5 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-68220 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68220 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155542 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|------------------------|--------------------------|--|
| Sample ID: LCSLL-68220 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68220 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155543 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00014 | 0.00020 0.0001500 0 95.0 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-68220 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68220 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155544 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 | 0.00020 0.005000 0 102 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2206938-001DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-6-16-22 | Batch ID: 68220 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155570 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0054 | 0.00020 0.005000 0 108 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2206938-001DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-6-16-22 | Batch ID: 68220 | RunNo: 88875 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3155571 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 | 0.00020 0.005000 0 106 75 125 1.91 20 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-68247 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68247 | RunNo: 88903 |
| Prep Date: 6/21/2022 | Analysis Date: 6/21/2022 | SeqNo: 3157367 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-68247 | SampType: LCSLL | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | Batch ID: 68247 | | | RunNo: 88903 | | | | | | |
| Prep Date: 6/21/2022 | Analysis Date: 6/21/2022 | | | SeqNo: 3157368 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00011 | 0.00020 | 0.0001500 | 0 | 70.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-68247 | SampType: LCS | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | Batch ID: 68247 | | | RunNo: 88903 | | | | | | |
| Prep Date: 6/21/2022 | Analysis Date: 6/21/2022 | | | SeqNo: 3157369 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0051 | 0.00020 | 0.005000 | 0 | 101 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68304 | SampType: MBLK | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: PBW | Batch ID: 68304 | | | RunNo: 88976 | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | | | SeqNo: 3159890 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-68304 | SampType: LCSLL | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | Batch ID: 68304 | | | RunNo: 88976 | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | | | SeqNo: 3159891 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00015 | 0.00020 | 0.0001500 | 0 | 96.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-68304 | SampType: LCS | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | Batch ID: 68304 | | | RunNo: 88976 | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 6/23/2022 | | | SeqNo: 3159892 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156950 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156953 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-68190 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156956 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 104 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-68190 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 68190 | RunNo: 88885 |
| Prep Date: 6/20/2022 | Analysis Date: 6/20/2022 | SeqNo: 3156958 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 112 70 130 7.41 20 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163530 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-68319 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 68319 | RunNo: 89001 |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | SeqNo: 3163531 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|--|
| Sample ID: LCS-68319 | SampType: LCS | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 68319 | | | RunNo: 89001 | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | | | SeqNo: 3163532 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| 1,2-Dibromoethane | 0.088 | 0.010 | 0.1000 | 0 | 87.8 | 70 | 130 | | | | |

| | | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|--|
| Sample ID: LCSD-68319 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68319 | | | RunNo: 89001 | | | | | | | |
| Prep Date: 6/23/2022 | Analysis Date: 6/23/2022 | | | SeqNo: 3163533 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| 1,2-Dibromoethane | 0.11 | 0.010 | 0.1000 | 0 | 109 | 70 | 130 | 21.9 | 20 | R | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68262 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68262 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/21/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173223 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.019 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.037 | | 0.03750 | | 98.8 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68262 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68262 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/21/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173265 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 69.7 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.017 | | 0.01875 | | 89.8 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68262 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68262 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/21/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173266 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 68.2 | 31.7 | 75.4 | 2.25 | 20 | |
| Surr: DNOP | 0.017 | | 0.01875 | | 89.9 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68348 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173275 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.6 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68348 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173276 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68348 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68348 | | RunNo: 89239 | | | | | | | |
| Prep Date: 6/24/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173277 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: DNOP | 0.021 | | 0.01875 | | 112 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160360 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 96.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G88994 | | RunNo: 88994 | | | | | | | |
| Prep Date: | Analysis Date: 6/23/2022 | | SeqNo: 3160361 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.55 | 0.050 | 0.5000 | 0 | 109 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161785 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 98.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161786 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 107 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 211 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206938-006ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-41 | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161790 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.56 | 0.050 | 0.5000 | 0.03780 | 105 | 70 | 130 | | | |
| Surr: BFB | 41 | | 20.00 | | 207 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2206938-006amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-41 | Batch ID: A89029 | | RunNo: 89029 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161791 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------|-----------|-------------|--|----------|-------------|-------|----------|------|
| Sample ID: 2206938-006amsd | | SampType: MSD | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: MKTF-41 | | Batch ID: A89029 | | | RunNo: 89029 | | | | | |
| Prep Date: | | Analysis Date: 6/24/2022 | | | SeqNo: 3161791 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.57 | 0.050 | 0.5000 | 0.03780 | 106 | 70 | 130 | 0.601 | 20 | |
| Surr: BFB | 42 | | 20.00 | | 209 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R89017 | | | RunNo: 89017 | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | | SeqNo: 3161447 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 94.2 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Chlorobenzene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 87.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 94.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89017 | | | RunNo: 89017 | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | | SeqNo: 3161448 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89017 | | | RunNo: 89017 | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | | SeqNo: 3161448 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89017 | | RunNo: 89017 | | | | | | | |
| Prep Date: | Analysis Date: 6/24/2022 | | SeqNo: 3161448 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 97.1 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68218 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68218 | RunNo: 89168 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | SeqNo: 3169239 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.7 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 97 | | 200.0 | | 48.6 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 69.8 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.4 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 64.7 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 80.4 | 48 | 155 | | | |

| Sample ID: lcs-68218 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68218 | RunNo: 89168 | | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | SeqNo: 3169240 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68218 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68218 | | RunNo: 89168 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | | SeqNo: 3169240 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 72 | 10 | 100.0 | 0 | 72.2 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 64 | 5.0 | 100.0 | 0 | 64.4 | 15 | 89.8 | | | |
| Phenol | 89 | 20 | 200.0 | 0 | 44.5 | 17 | 61.1 | | | |
| Pyrene | 86 | 10 | 100.0 | 0 | 86.2 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 41.9 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 76.7 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.5 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 73 | | 100.0 | | 73.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 91.2 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: lcsd-68218 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68218 | | RunNo: 89168 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/30/2022 | | SeqNo: 3169241 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 75 | 10 | 100.0 | 0 | 74.8 | 21.3 | 104 | 3.65 | 45.3 | |
| 1,4-Dichlorobenzene | 63 | 5.0 | 100.0 | 0 | 63.2 | 15 | 89.8 | 1.81 | 39.6 | |
| Phenol | 88 | 20 | 200.0 | 0 | 44.2 | 17 | 61.1 | 0.867 | 42.5 | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.4 | 61 | 123 | 0.990 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 55.2 | 29.4 | 87.7 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 42.2 | 28.5 | 64.7 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 80.3 | 18.6 | 129 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 72 | | 100.0 | | 71.8 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 72.5 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.0 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68278 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 68278 | | RunNo: 89212 | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/3/2022 | | SeqNo: 3171204 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 78 | 10 | 100.0 | 0 | 78.2 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 65 | 5.0 | 100.0 | 0 | 65.4 | 15 | 89.8 | | | |
| Phenol | 93 | 20 | 200.0 | 0 | 46.6 | 17 | 61.1 | | | |
| Pyrene | 82 | 10 | 100.0 | 0 | 81.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 61.2 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 89 | | 200.0 | | 44.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 76.5 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 77 | | 100.0 | | 76.6 | 36.9 | 103 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68278 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSW | Batch ID: 68278 | RunNo: 89212 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/3/2022 | SeqNo: 3171204 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 76 | | 100.0 | | 76.2 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.3 | 48 | 155 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: lcsd-68278 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68278 | RunNo: 89212 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/3/2022 | SeqNo: 3171205 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 78 | 10 | 100.0 | 0 | 77.8 | 21.3 | 104 | 0.557 | 45.3 | |
| 1,4-Dichlorobenzene | 68 | 5.0 | 100.0 | 0 | 68.0 | 15 | 89.8 | 3.89 | 39.6 | |
| Phenol | 35 | 20 | 200.0 | 0 | 17.4 | 17 | 61.1 | 91.3 | 42.5 | R |
| Pyrene | 88 | 10 | 100.0 | 0 | 88.0 | 61 | 123 | 7.41 | 11.8 | |
| Surr: 2-Fluorophenol | 8.1 | | 200.0 | | 4.05 | 29.4 | 87.7 | 0 | 0 | S |
| Surr: Phenol-d5 | 33 | | 200.0 | | 16.7 | 28.5 | 64.7 | 0 | 0 | S |
| Surr: 2,4,6-Tribromophenol | 13 | | 200.0 | | 6.58 | 18.6 | 129 | 0 | 0 | S |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 79.4 | 36.9 | 103 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.4 | 38.1 | 99.9 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 94.8 | 48 | 155 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68278 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: PBW | Batch ID: 68278 | RunNo: 89274 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174724 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb-68278 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: PBW | Batch ID: 68278 | | | RunNo: 89274 | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/6/2022 | | | SeqNo: 3174724 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 64.6 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 97 | | 200.0 | | 48.4 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.0 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 79.1 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 70.1 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 48 | 155 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68218 | | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | | Batch ID: 68218 | | RunNo: 89096 | | | | | | |
| Prep Date: 6/20/2022 | | Analysis Date: 6/28/2022 | | SeqNo: 3165520 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 77.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 87.5 | 72.3 | 147 | | | |

| Sample ID: lcs-68218 lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | | Batch ID: 68218 | | RunNo: 89096 | | | | | | |
| Prep Date: 6/20/2022 | | Analysis Date: 6/29/2022 | | SeqNo: 3165521 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 0.10 | 2.000 | 0 | 40.0 | 20.2 | 48.4 | | | |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 22.2 | 80.3 | | | S |
| 2-Methylnaphthalene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 20.6 | 80.1 | | | S |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 33.3 | 86 | | | S |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 38.2 | 93.9 | | | S |
| Anthracene | 2.5 | 0.30 | 2.000 | 0 | 127 | 41.1 | 95.6 | | | S |
| Fluoranthene | 3.2 | 0.30 | 2.000 | 0 | 158 | 52.9 | 123 | | | S |
| Pyrene | 2.0 | 1.0 | 2.000 | 0 | 101 | 51 | 113 | | | |
| Benz(a)anthracene | 3.4 | 0.30 | 2.000 | 0 | 170 | 51 | 147 | | | S |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.4 | 0.30 | 2.000 | 0 | 118 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 3.2 | 0.30 | 2.000 | 0 | 162 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.2 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68218 lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 68218 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3165521 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 74 | | 100.0 | | 74.2 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-68218 lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68218 | | RunNo: 89096 | | | | | | | |
| Prep Date: 6/20/2022 | Analysis Date: 6/29/2022 | | SeqNo: 3165522 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 0.10 | 2.000 | 0 | 43.0 | 20.2 | 48.4 | 9.76 | 30.1 | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 21.3 | 79.9 | 2.78 | 25.6 | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 22.2 | 80.3 | 0 | 25 | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 20.6 | 80.1 | 1.36 | 25 | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 29.8 | 82.7 | 0 | 27.8 | |
| Fluorene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 33.3 | 86 | 8.28 | 26.4 | S |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 38.2 | 93.9 | 1.18 | 27.9 | |
| Anthracene | 2.0 | 0.30 | 2.000 | 0 | 102 | 41.1 | 95.6 | 12.5 | 25.6 | S |
| Fluoranthene | 2.4 | 0.30 | 2.000 | 0 | 120 | 52.9 | 123 | 13.3 | 22.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 2.8 | 0.30 | 2.000 | 0 | 141 | 51 | 147 | 33.1 | 24.1 | R |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 55.3 | 115 | 2.41 | 20 | |
| Benzo(b)fluoranthene | 2.3 | 0.30 | 2.000 | 0 | 116 | 44.4 | 136 | 28.6 | 24.5 | R |
| Indeno(1,2,3-cd)pyrene | 3.3 | 0.30 | 2.000 | 0 | 166 | 31.4 | 165 | 59.4 | 21.1 | SR |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 77.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.2 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 68.5 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 76 | | 100.0 | | 75.7 | 72.3 | 147 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68278 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 68278 | | RunNo: 89252 | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/5/2022 | | SeqNo: 3173302 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb-68278 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68278 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173302 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | 0.36 | 1.0 | | | | | | | | J |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 88 | | 100.0 | | 87.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 96 | | 200.0 | | 48.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 85 | | 100.0 | | 84.7 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 130 | | 100.0 | | 127 | 72.3 | 147 | | | |

| Sample ID: lcs-68278 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68278 | RunNo: 89252 | | | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/5/2022 | SeqNo: 3173303 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 29.8 | 82.7 | | | S |
| Fluorene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 33.3 | 86 | | | S |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 38.2 | 93.9 | | | S |
| Anthracene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 103 | 52.9 | 123 | | | |
| Pyrene | 2.0 | 1.0 | 2.000 | 0 | 98.0 | 51 | 113 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 101 | 51 | 147 | | | |
| Chrysene | 2.0 | 0.30 | 2.000 | 0 | 101 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 101 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 85 | | 100.0 | | 84.8 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 94 | | 200.0 | | 47.1 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 80 | | 100.0 | | 80.3 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 72.3 | 147 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2206938

14-Jul-22

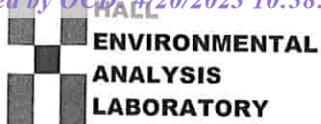
Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: lcsd-68278 | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 68278 | | | RunNo: 89252 | | | | | | |
| Prep Date: 6/22/2022 | Analysis Date: 7/5/2022 | | | SeqNo: 3173304 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.98 | 0.10 | 2.000 | 0 | 49.0 | 20.2 | 48.4 | 4.17 | 30.1 | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 21.3 | 79.9 | 1.32 | 25.6 | |
| 1-Methylnaphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 22.2 | 80.3 | 4.03 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 20.6 | 80.1 | 6.80 | 25 | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 29.8 | 82.7 | 2.47 | 27.8 | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 33.3 | 86 | 7.06 | 26.4 | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 38.2 | 93.9 | 3.35 | 27.9 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 41.1 | 95.6 | 12.2 | 25.6 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 52.9 | 123 | 24.6 | 22.8 | R |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 51 | 113 | 5.59 | 20 | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 51 | 147 | 21.6 | 24.1 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 55.3 | 115 | 3.28 | 20 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 44.4 | 136 | 10.4 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 31.4 | 165 | 11.4 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 78.8 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.5 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 75 | | 100.0 | | 74.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 93.7 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2206938**

RcptNo: 1

Received By: **Cheyenne Cason** 6/17/2022 7:00:00 AMCompleted By: **Cheyenne Cason** 6/17/2022 7:23:53 AMReviewed By: *6-17-22*
*KDC 6-20-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐ *in 6/17/22*
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: *15* *in 6/20/22*
14 *7*
(2 or 12 unless noted)

Adjusted? *yes*Checked by: *in 6/17/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes
- ☐
- No
- ☐
- NA
- ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

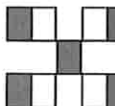
16. Additional remarks: *0.5ml of HNO3 was added to sample 0030 for pH < 2.*
17. Cooler Information *0.5ml of HNO3 was added to sample 0100 for pH < 2. in 6/17/22.*

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |
| 2 | 3.2 | Good | Yes | | | |
| 3 | 3.5 | Good | Yes | | | |
| 4 | 4.7 | Good | Yes | | | |

pH < 2. in 6/20/22.

| | | | | | | | | | | | | | | | | | | | | |
|---|-------|--------|--|-------------------------|-------------------|------------|------------------|---------------|---------------|-----------------------------|-----------------------|----------------|--------------------------|----------------|-------------|------------------------|-------------|---------------|------------|-----------------|
| Client: Marathon Gallup Refinery | | | X Standard Rush | | | | | | | | | | | | | | | | | |
| Project Name: | | | Project Name: | | | | | | | | | | | | | | | | | |
| Billing Address: 92 Giant Crossing Road
Jamestown, NM, 87347 | | | 2022 GW Sampling 2nd Quarter | | | | | | | | | | | | | | | | | |
| Phone #: 808-640-1823 | | | Project #: 697-080-001 | | | | | | | | | | | | | | | | | |
| Email or Fax#: | | | Project Manager: Lesli Alexander/Mackensie Swift | | | | | | | | | | | | | | | | | |
| QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation) | | | Sampler: ☐ Az Compliance ☐ Other | | | | | | | | | | | | | | | | | |
| Accreditation: ☐ NELAC ☐ Other | | | On Ice: ☒ Yes ☐ No | | | | | | | | | | | | | | | | | |
| EDD (Type): | | | # of Coolers: 4 | | | | | | | | | | | | | | | | | |
| Cooler Temp (including CFI): | | | See Remarks | | | | | | | | | | | | | | | | | |
| Container Type and # | | | Preservative Type | | | | | | | | | | | | | | | | | |
| HEAL No. | | | 2206038 | | | | | | | | | | | | | | | | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | See Analyte List | 8260B: VOC | 8270C: SVOC | 8270C SIM: PAH, 1,4 Dioxane | 8015: TPH GRO/DRO/MRO | E200.7: Metals | E200.7: Dissolved Metals | E245.1 Mercury | E504.1: EDB | E335.4: Cyanide Subbed | 537.1: PFAS | SM 5201B: BOD | 410.4: COD | SM9223B E. Coli |
| 4/16 | 8:30 | | EB-6-16-22 | 14 | | 001 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 8:45 | | OW-68 | 14 | | 002 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 9:15 | | OW-67 | 14 | | 003 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 9:45 | | MKT-43 | 14 | | 004 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 10:10 | | MKT-41 | 14 | | 005 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 10:45 | | FB-6-16-22 | 3 | | 006 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 10:45 | | OW-6-16-22 | 14 | | 007 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 11:05 | | Trip Blank | | | 008 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 11:05 | | NKTF-32 | | | 009 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 11:05 | | Per Sample with | | | 010 | X | X | X | X | X | X | X | X | X | X | | | | |
| 4/16 | 1:00 | | Relinquished by: Hilario Torres | Received by: One Cantor | Via: 6/17/22 | Date: 0700 | 1.1-0.1 = 1.0 | 3.3-0.1 = 3.2 | 3.6-0.1 = 3.5 | 4.8-0.1 = 4.7 | | | | | | | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 19, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 2nd Quarter

OrderNo.: 2207002

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/1/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2207002
Date: 7/19/2022

CLIENT: Marathon
Project: 2022 GW Sampling 2nd Quarter

"S" flags denote that the surrogate or spike recovery is outside the standard limits.

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 7/6/2022 3:44:16 PM | G89271 |
| Surr: BFB | 92.4 | 0 | 70-130 | | %Rec | 1 | 7/6/2022 3:44:16 PM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Toluene | 0.20 | 0.20 | 1.0 | J | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 98.7 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Surr: Dibromofluoromethane | 105 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 3:52:00 AM | R89347 |
| Surr: Toluene-d8 | 96.6 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 3:52:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 7/7/2022 12:29:08 AM | 68566 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.047 | 0.016 | 0.064 | J | mg/L | 1 | 7/12/2022 6:30:00 PM | 68572 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/12/2022 6:30:00 PM | 68572 |
| Surr: DNOP | 109 | 0 | 42.2-138 | | %Rec | 1 | 7/12/2022 6:30:00 PM | 68572 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Di-n-butyl phthalate | 17 | 7.7 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: 2-Fluorophenol | 24.7 | 0 | 29.4-87.7 | S | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: Phenol-d5 | 18.1 | 0 | 28.5-64.7 | S | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: 2,4,6-Tribromophenol | 40.3 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: Nitrobenzene-d5 | 33.1 | 0 | 36.9-103 | S | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 32.2 | 0 | 38.1-99.9 | S | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 47.0 | 0 | 48-155 | S | %Rec | 1 | 7/13/2022 9:10:58 PM | 68563 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Pyrene | 0.34 | 0.32 | 1.0 | J | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/12/2022 7:07:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 32.4 | 0 | 31.6-100 | | %Rec | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 33.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/12/2022 7:07:00 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 48.8 | 0 | 72.3-147 | S | %Rec | 1 | 7/12/2022 7:07:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 7/11/2022 11:57:32 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:33:29 PM | 68545 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:33:29 PM | 68545 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:33:29 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:33:29 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:11:12 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 8:30:00 AM

Lab ID: 2207002-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| Zinc | 0.0067 | 0.0032 | 0.010 | J | mg/L | 1 | 7/5/2022 3:29:46 PM | B89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 5:01:01 PM | A89215 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 5:01:01 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 5:01:01 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 5:01:01 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:13:19 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 61 | 0.18 | 1.0 | | mg/L | 20 | 7/7/2022 9:10:00 AM | G89271 |
| Surr: BFB | 111 | 0 | 70-130 | | %Rec | 20 | 7/7/2022 9:10:00 AM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 22000 | 110 | 500 | | µg/L | 500 | 7/9/2022 4:15:00 AM | R89347 |
| Toluene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Ethylbenzene | 930 | 11 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | 610 | 20 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Isopropylbenzene | 19 | 9.1 | 50 | J | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| n-Propylbenzene | 50 | 9.1 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Xylenes, Total | ND | 19 | 75 | | µg/L | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 4:38:00 AM | R89347 |
| Surr: Toluene-d8 | 97.6 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 4:38:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/7/2022 12:44:34 AM | 68566 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.5 | 0.016 | 0.064 | | mg/L | 1 | 7/12/2022 6:54:02 PM | 68572 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 7/12/2022 6:54:02 PM | 68572 |
| Surr: DNOP | 92.6 | 0 | 42.2-138 | | %Rec | 1 | 7/12/2022 6:54:02 PM | 68572 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Phenol | 38 | 18 | 20 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: 2-Fluorophenol | 50.0 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: Phenol-d5 | 39.4 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: 2,4,6-Tribromophenol | 82.2 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: Nitrobenzene-d5 | 66.5 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 61.8 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 87.3 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 9:54:50 PM | 68563 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Naphthalene | 15 | 0.20 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| 1-Methylnaphthalene | 17 | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Acenaphthene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Fluorene | 0.68 | 0.095 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Phenanthrene | 0.36 | 0.16 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/12/2022 7:56:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 65.0 | 0 | 31.6-100 | | %Rec | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 50.8 | 0 | 26.7-90.1 | | %Rec | 1 | 7/12/2022 7:56:00 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 77.6 | 0 | 72.3-147 | | %Rec | 1 | 7/12/2022 7:56:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 2.3 | 0.0079 | 0.015 | * | mg/L | 5 | 7/11/2022 12:00:15 PM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Cobalt | 0.010 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Nickel | 0.10 | 0.0053 | 0.010 | * | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| Zinc | 0.0071 | 0.0039 | 0.010 | J | mg/L | 1 | 7/11/2022 11:59:01 AM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:40:49 PM | 68545 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:40:49 PM | 68545 |
| Lead | 0.00074 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:40:49 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:40:49 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:15:27 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:00:00 AM

Lab ID: 2207002-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.4 | 0.0056 | 0.010 | * | mg/L | 5 | 7/5/2022 3:43:25 PM | B89290 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Cobalt | 0.0077 | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Nickel | 0.097 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| Zinc | 0.0084 | 0.0032 | 0.010 | J | mg/L | 1 | 7/5/2022 3:35:49 PM | B89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 5:03:42 PM | A89215 |
| Arsenic | 0.0034 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 5:03:42 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 5:03:42 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 5:03:42 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:21:50 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 1.2 | 0.0090 | 0.050 | | mg/L | 1 | 7/7/2022 9:33:33 AM | G89271 |
| Surr: BFB | 93.6 | 0 | 70-130 | | %Rec | 1 | 7/7/2022 9:33:33 AM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 1.1 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Ethylbenzene | ND | 1.1 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | 1200 | 20 | 50 | | µg/L | 50 | 7/9/2022 5:24:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 5 | 7/9/2022 5:47:00 AM | R89347 |
| Surr: Toluene-d8 | 96.1 | 0 | 70-130 | | %Rec | 5 | 7/9/2022 5:47:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/7/2022 12:59:51 AM | 68566 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.6 | 0.016 | 0.064 | | mg/L | 1 | 7/12/2022 7:18:14 PM | 68572 |
| Motor Oil Range Organics (MRO) | 0.056 | 0.052 | 0.080 | J | mg/L | 1 | 7/12/2022 7:18:14 PM | 68572 |
| Surr: DNOP | 109 | 0 | 42.2-138 | | %Rec | 1 | 7/12/2022 7:18:14 PM | 68572 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: 2-Fluorophenol | 40.8 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: Phenol-d5 | 30.9 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: 2,4,6-Tribromophenol | 61.6 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: Nitrobenzene-d5 | 54.6 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 50.5 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 70.4 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 10:38:16 PM | 68563 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.50 | 0.11 | 1.0 | J | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/12/2022 8:42:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 52.7 | 0 | 31.6-100 | | %Rec | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 46.9 | 0 | 26.7-90.1 | | %Rec | 1 | 7/12/2022 8:42:00 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 67.2 | 0 | 72.3-147 | S | %Rec | 1 | 7/12/2022 8:42:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 0.17 | 0.0016 | 0.0030 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Cobalt | 0.0043 | 0.0035 | 0.0060 | J | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Nickel | 0.088 | 0.0053 | 0.010 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| Zinc | 0.0097 | 0.0039 | 0.010 | J | mg/L | 1 | 7/11/2022 12:01:40 PM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:45:42 PM | 68545 |
| Arsenic | 0.00092 | 0.00013 | 0.0010 | J | mg/L | 1 | 7/7/2022 2:45:42 PM | 68545 |
| Lead | 0.00099 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:45:42 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:45:42 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:23:57 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.15 | 0.0011 | 0.0020 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Cobalt | 0.0037 | 0.0024 | 0.0060 | J | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Nickel | 0.089 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 7/5/2022 3:44:51 PM | B89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 5:06:23 PM | A89215 |
| Arsenic | 0.00079 | 0.00012 | 0.0010 | J | mg/L | 1 | 7/1/2022 5:06:23 PM | A89215 |
| Lead | 0.00035 | 0.000057 | 0.00050 | J | mg/L | 1 | 7/1/2022 5:06:23 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 5:06:23 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:26:05 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022

Lab ID: 2207002-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 61 | 0.18 | 1.0 | | mg/L | 20 | 7/7/2022 9:57:03 AM | G89271 |
| Surr: BFB | 115 | 0 | 70-130 | | %Rec | 20 | 7/7/2022 9:57:03 AM | G89271 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 23000 | 110 | 500 | | µg/L | 500 | 7/9/2022 6:33:00 AM | R89347 |
| Toluene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Ethylbenzene | 870 | 11 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | 600 | 20 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Isopropylbenzene | 18 | 9.1 | 50 | J | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| n-Propylbenzene | 47 | 9.1 | 50 | J | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Xylenes, Total | ND | 19 | 75 | | µg/L | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 6:56:00 AM | R89347 |
| Surr: Toluene-d8 | 96.5 | 0 | 70-130 | | %Rec | 50 | 7/9/2022 6:56:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 2nd Quarter

Lab ID: 2207002-004B

Client Sample ID: DUP-6-30-22

Collection Date: 6/30/2022

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: BRM | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 7/7/2022 1:15:12 AM | 68566 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022

Lab ID: 2207002-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.1 | 0.016 | 0.064 | | mg/L | 1 | 7/12/2022 7:42:27 PM | 68572 |
| Motor Oil Range Organics (MRO) | 0.074 | 0.052 | 0.080 | J | mg/L | 1 | 7/12/2022 7:42:27 PM | 68572 |
| Surr: DNOP | 86.4 | 0 | 42.2-138 | | %Rec | 1 | 7/12/2022 7:42:27 PM | 68572 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Phenol | 34 | 18 | 20 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: 2-Fluorophenol | 44.8 | 0 | 29.4-87.7 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: Phenol-d5 | 35.1 | 0 | 28.5-64.7 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: 2,4,6-Tribromophenol | 61.5 | 0 | 18.6-129 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: Nitrobenzene-d5 | 60.5 | 0 | 36.9-103 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 38.1-99.9 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 70.7 | 0 | 48-155 | | %Rec | 1 | 7/13/2022 11:21:33 PM | 68563 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.3 | 0.11 | 1.0 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Naphthalene | 14 | 0.20 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| 1-Methylnaphthalene | 16 | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Acenaphthene | 0.46 | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Fluorene | 0.62 | 0.095 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Phenanthrene | 0.30 | 0.16 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 7/12/2022 9:31:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022

Lab ID: 2207002-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 62.4 | 0 | 31.6-100 | | %Rec | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Surr: 2-Fluorobiphenyl | 47.7 | 0 | 26.7-90.1 | | %Rec | 1 | 7/12/2022 9:31:00 PM | 68563 |
| Surr: 4-Terphenyl-d14 | 67.6 | 0 | 72.3-147 | S | %Rec | 1 | 7/12/2022 9:31:00 PM | 68563 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022

Lab ID: 2207002-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: ELS | |
| Barium | 2.5 | 0.0079 | 0.015 | * | mg/L | 5 | 7/11/2022 12:04:39 PM | 68545 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Cobalt | 0.0095 | 0.0035 | 0.0060 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Nickel | 0.10 | 0.0053 | 0.010 | * | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| Zinc | 0.0090 | 0.0039 | 0.010 | J | mg/L | 1 | 7/11/2022 12:03:19 PM | 68545 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/7/2022 2:48:08 PM | 68545 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 7/7/2022 2:48:08 PM | 68545 |
| Lead | 0.00051 | 0.000061 | 0.00050 | | mg/L | 1 | 7/7/2022 2:48:08 PM | 68545 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 7/7/2022 2:48:08 PM | 68545 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:28:14 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022

Lab ID: 2207002-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.4 | 0.0056 | 0.010 | * | mg/L | 5 | 7/5/2022 3:49:28 PM | B89290 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Cobalt | 0.0079 | 0.0024 | 0.0060 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Nickel | 0.10 | 0.0033 | 0.010 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| Zinc | 0.0092 | 0.0032 | 0.010 | J | mg/L | 1 | 7/5/2022 3:48:05 PM | B89290 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 7/1/2022 5:09:05 PM | A89215 |
| Arsenic | 0.0032 | 0.00012 | 0.0010 | | mg/L | 1 | 7/1/2022 5:09:05 PM | A89215 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 7/1/2022 5:09:05 PM | A89215 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 7/1/2022 5:09:05 PM | A89215 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 7/6/2022 4:30:22 PM | 68567 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-6-30-22

Project: 2022 GW Sampling 2nd Quarter

Collection Date: 6/30/2022 9:45:00 AM

Lab ID: 2207002-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 98.8 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 7:42:00 AM | R89347 |
| Surr: Toluene-d8 | 95.0 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 7:42:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2207002-006A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|-----|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Acetone | 3.8 | 2.5 | 10 | J | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2207002

Date Reported: 7/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 2nd Quarter

Collection Date:

Lab ID: 2207002-006A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 8:05:00 AM | R89347 |
| Surr: Toluene-d8 | 95.6 | 0 | 70-130 | | %Rec | 1 | 7/9/2022 8:05:00 AM | R89347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |



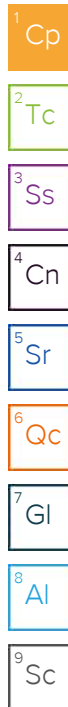
ANALYTICAL REPORT

July 15, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1511780
Samples Received: 07/06/2022
Project Number:
Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2207002-001F EB-6-30-22 L1511780-01 | 5 | |
| 2207002-002F OW-14 L1511780-02 | 6 | ⁴ Cn |
| 2207002-003F OW-30 L1511780-03 | 7 | ⁵ Sr |
| 2207002-004F DUP-6-30-22 L1511780-04 | 8 | |
| Qc: Quality Control Summary | 9 | ⁶ Qc |
| Wet Chemistry by Method 4500CN E-2016 | 9 | |
| Gl: Glossary of Terms | 10 | ⁷ Gl |
| Al: Accreditations & Locations | 11 | ⁸ Al |
| Sc: Sample Chain of Custody | 12 | ⁹ Sc |

2207002-001F EB-6-30-22 L1511780-01 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:44 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/30/22 08:30
07/06/22 09:15

1
Cp

2
Tc

3
Ss

2207002-002F OW-14 L1511780-02 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:45 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/30/22 09:00
07/06/22 09:15

4
Cn

5
Sr

2207002-003F OW-30 L1511780-03 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:46 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

06/30/22 09:45
07/06/22 09:15

6
Qc

7
Gl

8
Al

2207002-004F DUP-6-30-22 L1511780-04 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1893803 | 1 | 07/12/22 19:14 | 07/13/22 10:47 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

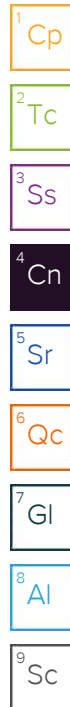
06/30/22 00:00
07/06/22 09:15

9
Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/13/2022 10:44 | WG1893803 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 07/13/2022 10:45 | WG1893803 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00713 | | 0.00500 | 1 | 07/13/2022 10:46 | WG1893803 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00873 | | 0.00500 | 1 | 07/13/2022 10:47 | WG1893803 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1511780-01,02,03,04

Method Blank (MB)

(MB) R3814178-1 07/13/22 10:39

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1511782-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1511782-03 07/13/22 10:48 • (DUP) R3814178-3 07/13/22 10:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 53.3 | P1 | 20 |

L1511925-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1511925-02 07/13/22 10:58 • (DUP) R3814178-6 07/13/22 10:59

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.00605 | ND | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3814178-2 07/13/22 10:40

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0936 | 93.6 | 87.1-120 | |

L1511782-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511782-03 07/13/22 10:48 • (MS) R3814178-4 07/13/22 10:52 • (MSD) R3814178-5 07/13/22 10:53

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0948 | 0.0919 | 92.8 | 89.9 | 1 | 90.0-110 | | J6 | 3.11 | 20 |

L1511925-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1511925-02 07/13/22 10:58 • (MS) R3814178-7 07/13/22 11:00 • (MSD) R3814178-8 07/13/22 11:03

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00605 | 0.0971 | 0.0935 | 91.1 | 87.5 | 1 | 90.0-110 | | J6 | 3.78 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

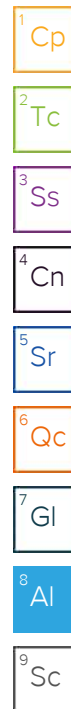
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

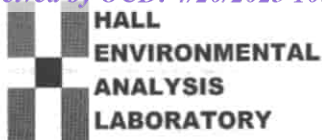
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 2569 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

E152

| | | | | | | | |
|---|--------------|-------------------------|-------------|------------------------------|----------------------|----------------------------|-----------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2207002-001F | EB-6-30-22 | 500AMBHDP | Groundw | 6/30/2022 8:30:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2207002-002F | OW-14 | 500AMBHDP | Groundw | 6/30/2022 9:00:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2207002-003F | OW-30 | 500AMBHDP | Groundw | 6/30/2022 9:45:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2207002-004F | DUP-6-30-22 | 500AMBHDP | Groundw | 6/30/2022 | 1 | Total Cyanide J and MDL -04 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ N If Applicable
 COC Signed/Accurate: ☒ N VOA Zero Headspace: ☒ N
 Bottles arrive intact: ☒ N Pres. Correct/Check: ☒ N
 Correct bottles used: ☒ N
 Sufficient volume sent: ☒ N
 RAD Screen <0.5 mR/hr: ☒ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|-----------------------|----------------------|--|---------------------|-------------------|---|--|
| Relinquished By: Cmc | Date: 7/1/2022 | Time: 7:25 AM | Received By: Jim C. [Signature] | Date: 7/6/22 | Time: 9:15 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples 07/01/22 41.0 = 0.4°C Attempt to Cool? _____ | |
| TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-68545 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176277 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-68545 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176278 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0022 | 0.0030 | 0.002000 | 0 | 108 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.2 | 50 | 150 | | | J |
| Cadmium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 97.2 | 50 | 150 | | | J |
| Cobalt | 0.0055 | 0.0060 | 0.006000 | 0 | 91.2 | 50 | 150 | | | J |
| Nickel | 0.0066 | 0.010 | 0.005000 | 0 | 132 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 93.9 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 119 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-68545 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 68545 | RunNo: 89314 | | | | | | | | |
| Prep Date: 7/5/2022 | Analysis Date: 7/7/2022 | SeqNo: 3176279 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.5 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 96.4 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 90.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175460 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175461 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0015 | 0.0020 | 0.002000 | 0 | 77.2 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.7 | 50 | 150 | | | J |
| Chromium | 0.0063 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 97.2 | 50 | 150 | | | J |
| Nickel | 0.0038 | 0.010 | 0.005000 | 0 | 75.1 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 99.6 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 106 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 121 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175462 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: 2207002-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-6-30-22 | Batch ID: B89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175538 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 70 | 130 | | | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | | | |
| Cadmium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Chromium | 0.55 | 0.0060 | 0.5000 | 0 | 110 | 70 | 130 | | | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.9 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006679 | 99.0 | 70 | 130 | | | |

| Sample ID: 2207002-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: EB-6-30-22 | Batch ID: B89290 | RunNo: 89290 | | | | | | | | |
| Prep Date: | Analysis Date: 7/5/2022 | SeqNo: 3175559 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 70 | 130 | 0.474 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | 3.61 | 20 | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | 0.813 | 20 | |
| Chromium | 0.54 | 0.0060 | 0.5000 | 0 | 109 | 70 | 130 | 1.22 | 20 | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 105 | 70 | 130 | 0.293 | 20 | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.4 | 70 | 130 | 0.597 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | 0.681 | 20 | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 106 | 70 | 130 | 0.101 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006679 | 98.7 | 70 | 130 | 0.322 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-68545 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175614 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|--------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-68545 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 68545 | | RunNo: 89286 | | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | SeqNo: 3175615 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.1 | 50 | 150 | | | J |
| Selenium | 0.00096 | 0.0010 | 0.001000 | 0 | 96.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|------------------------------------|-----------------------|----------|-----------|--------------------|----------|------|
| Sample ID: MSLCS-68545 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3175616 | | | Units: mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.5 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.6 | 85 | 115 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 89.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|-------------------------|-----------|--------------|----------------|-----------------------------|-------------|------|----------|------|
| Sample ID: 2207002-001DMSLL | | | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: EB-6-30-22 | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3176538 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 92.3 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.7 | 70 | 130 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 88.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|-------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2207002-001DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: EB-6-30-22 | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3176539 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|--------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|-------|----------|------|
| Sample ID: 2207002-001DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB-6-30-22 | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3176539 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 93.2 | 70 | 130 | 1.02 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 0.329 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.2 | 70 | 130 | 0.495 | 20 | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.8 | 70 | 130 | 4.87 | 20 | |

| | | | | | | | | | | |
|-----------------------------|--------|-------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2207002-002DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-14 | | Batch ID: 68545 | | | RunNo: 89286 | | | | | |
| Prep Date: 7/5/2022 | | Analysis Date: 7/7/2022 | | | SeqNo: 3176541 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 98.0 | 70 | 130 | | | |
| Arsenic | 0.030 | 0.0010 | 0.02500 | 0.003830 | 104 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0007410 | 89.2 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171349 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171350 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.00099 | 0.0010 | 0.001000 | 0 | 98.9 | 50 | 150 | | | J |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 127 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A89215 | RunNo: 89215 | | | | | | | | |
| Prep Date: | Analysis Date: 7/1/2022 | SeqNo: 3171351 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.4 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-68567 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 68567 | RunNo: 89265 |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174063 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|--------------------------------|--|
| Sample ID: LCSLL-68567 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 68567 | RunNo: 89265 |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174064 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00014 0.00020 0.0001500 | 0 96.5 50 150 J |

| | | |
|-----------------------------|--------------------------------|--|
| Sample ID: LCS-68567 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 68567 | RunNo: 89265 |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | SeqNo: 3174065 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 98.9 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-68566 | SampType: LCSD | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSS02 | Batch ID: 68566 | | | RunNo: 89272 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/6/2022 | | | SeqNo: 3174557 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.076 | 0.010 | 0.1000 | 0 | 76.3 | 70 | 130 | 10.9 | 20 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175380 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-68566 | SampType: LCS | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: LCSW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175381 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 99.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-68566 | SampType: MBLK | | | TestCode: EPA Method 8011/504.1: EDB | | | | | | |
| Client ID: PBW | Batch ID: 68566 | | | RunNo: 89289 | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/7/2022 | | | SeqNo: 3175387 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-68572 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 68572 | | RunNo: 89401 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3181534 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.022 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 101 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-68572 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 68572 | | RunNo: 89401 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3181535 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 77.8 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.017 | | 0.01875 | | 92.5 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-68572 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 68572 | | RunNo: 89401 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3181536 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 60.2 | 31.7 | 75.4 | 25.5 | 20 | R |
| Surr: DNOP | 0.017 | | 0.01875 | | 88.5 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174470 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: G89271 | | RunNo: 89271 | | | | | | | |
| Prep Date: | Analysis Date: 7/6/2022 | | SeqNo: 3174471 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.52 | 0.050 | 0.5000 | 0 | 103 | 80 | 120 | | | |
| Surr: BFB | 40 | | 20.00 | | 202 | 70 | 130 | | | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178063 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.8 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 99.0 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.3 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 108 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs 2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178064 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.2 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 87.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R89347 | | RunNo: 89347 | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | SeqNo: 3178065 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|--------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | RunNo: 89347 | | | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | SeqNo: 3178065 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | | RunNo: 89347 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3178065 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |

| Sample ID: mb 2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | | RunNo: 89347 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3178066 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------------|-----------|--|------|----------|--------------------|------|----------|------|
| Sample ID: mb 2 | | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | | Batch ID: R89347 | | RunNo: 89347 | | | | | | |
| Prep Date: | | Analysis Date: 7/8/2022 | | SeqNo: 3178066 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: mb 2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R89347 | | | RunNo: 89347 | | | | | | |
| Prep Date: | Analysis Date: 7/8/2022 | | | SeqNo: 3178066 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 96.5 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| Sample ID: MB-68563 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 68563 | RunNo: 89411 | | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/13/2022 | SeqNo: 3183140 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 92 | | 200.0 | | 45.8 | 29.4 | 87.7 | | | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.6 | 28.5 | 64.7 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 56.6 | 18.6 | 129 | | | |
| Surr: Nitrobenzene-d5 | 57 | | 100.0 | | 56.9 | 36.9 | 103 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.4 | 38.1 | 99.9 | | | |
| Surr: 4-Terphenyl-d14 | 82 | | 100.0 | | 81.9 | 48 | 155 | | | |

| Sample ID: LCS-68563 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 68563 | RunNo: 89411 | | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/13/2022 | SeqNo: 3183143 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon
Project: 2022 GW Sampling 2nd Quarter

| Sample ID: LCS-68563 | | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|--|
| Client ID: LCSW | | Batch ID: 68563 | | RunNo: 89411 | | | | | | | |
| Prep Date: 7/6/2022 | | Analysis Date: 7/13/2022 | | SeqNo: 3183143 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Acenaphthene | 33 | 10 | 100.0 | 0 | 33.2 | 21.3 | 104 | | | | |
| 1,4-Dichlorobenzene | 27 | 5.0 | 100.0 | 0 | 27.4 | 15 | 89.8 | | | | |
| Phenol | 42 | 20 | 200.0 | 0 | 20.9 | 17 | 61.1 | | | | |
| Pyrene | 60 | 10 | 100.0 | 0 | 60.3 | 61 | 123 | | | S | |
| Surr: 2-Fluorophenol | 50 | | 200.0 | | 25.1 | 29.4 | 87.7 | | | S | |
| Surr: Phenol-d5 | 38 | | 200.0 | | 19.2 | 28.5 | 64.7 | | | S | |
| Surr: 2,4,6-Tribromophenol | 79 | | 200.0 | | 39.4 | 18.6 | 129 | | | | |
| Surr: Nitrobenzene-d5 | 34 | | 100.0 | | 33.6 | 36.9 | 103 | | | S | |
| Surr: 2-Fluorobiphenyl | 31 | | 100.0 | | 31.2 | 38.1 | 99.9 | | | S | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 72.8 | 48 | 155 | | | | |

| Sample ID: LCSD-68563 | | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|--|
| Client ID: LCSS02 | | Batch ID: 68563 | | RunNo: 89411 | | | | | | | |
| Prep Date: 7/6/2022 | | Analysis Date: 7/13/2022 | | SeqNo: 3183144 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Acenaphthene | 36 | 10 | 100.0 | 0 | 35.8 | 21.3 | 104 | 7.58 | 45.3 | | |
| 1,4-Dichlorobenzene | 33 | 5.0 | 100.0 | 0 | 33.0 | 15 | 89.8 | 18.6 | 39.6 | | |
| Phenol | 49 | 20 | 200.0 | 0 | 24.3 | 17 | 61.1 | 15.3 | 42.5 | | |
| Pyrene | 57 | 10 | 100.0 | 0 | 57.4 | 61 | 123 | 4.89 | 11.8 | S | |
| Surr: 2-Fluorophenol | 59 | | 200.0 | | 29.4 | 29.4 | 87.7 | 0 | 0 | | |
| Surr: Phenol-d5 | 45 | | 200.0 | | 22.3 | 28.5 | 64.7 | 0 | 0 | S | |
| Surr: 2,4,6-Tribromophenol | 76 | | 200.0 | | 38.2 | 18.6 | 129 | 0 | 0 | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 37.8 | 36.9 | 103 | 0 | 0 | | |
| Surr: 2-Fluorobiphenyl | 35 | | 100.0 | | 34.8 | 38.1 | 99.9 | 0 | 0 | S | |
| Surr: 4-Terphenyl-d14 | 66 | | 100.0 | | 65.8 | 48 | 155 | 0 | 0 | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-68563 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 68563 | | RunNo: 89437 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3181819 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 53.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 79 | | 200.0 | | 39.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.4 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 90 | | 100.0 | | 89.8 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-68563 lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 68563 | | RunNo: 89437 | | | | | | | |
| Prep Date: 7/6/2022 | Analysis Date: 7/12/2022 | | SeqNo: 3181820 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.0 | 0.10 | 2.000 | 0 | 51.0 | 20.2 | 48.4 | | | S |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 29.8 | 82.7 | | | |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 52.9 | 123 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 88.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 51 | 147 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 109 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 78 | | 100.0 | | 78.1 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2207002

19-Jul-22

Client: Marathon

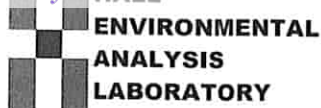
Project: 2022 GW Sampling 2nd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-68563 lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 68563 | | RunNo: 89437 | | | | | | |
| Prep Date: 7/6/2022 | | Analysis Date: 7/12/2022 | | SeqNo: 3181820 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 98 | | 200.0 | | 49.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 73 | | 100.0 | | 72.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 87.2 | 72.3 | 147 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: Icsd-68563 lf | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | | Batch ID: 68563 | | | RunNo: 89437 | | | | | |
| Prep Date: 7/6/2022 | | Analysis Date: 7/12/2022 | | | SeqNo: 3181821 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.1 | 0.10 | 2.000 | 0 | 53.0 | 20.2 | 48.4 | 3.85 | 30.1 | S |
| Naphthalene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21.3 | 79.9 | 1.38 | 25.6 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 22.2 | 80.3 | 2.82 | 25 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 20.6 | 80.1 | 2.86 | 25 | |
| Acenaphthene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 29.8 | 82.7 | 3.68 | 27.8 | S |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 33.3 | 86 | 4.71 | 26.4 | S |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 38.2 | 93.9 | 4.35 | 27.9 | S |
| Anthracene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 41.1 | 95.6 | 6.59 | 25.6 | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 52.9 | 123 | 6.19 | 22.8 | |
| Pyrene | 1.9 | 1.0 | 2.000 | 0 | 94.0 | 51 | 113 | 6.59 | 20 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 100 | 51 | 147 | 3.05 | 24.1 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 55.3 | 115 | 3.21 | 20 | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 44.4 | 136 | 1.01 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 116 | 31.4 | 165 | 6.22 | 21.1 | |
| Surr: Nitrobenzene-d5 | 79 | | 100.0 | | 79.0 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 75 | | 100.0 | | 74.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 79.5 | 72.3 | 147 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2207002

RcptNo: 1

Received By: Juan Rojas

7/1/2022 6:50:00 AM

Juan Rojas

Completed By: Cheyenne Cason

7/1/2022 7:16:15 AM

Cheyenne Cason

Reviewed By:

*7-1-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 84
(<2 or >12 unless noted)

Adjusted? NOChecked by: jn 7/1/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

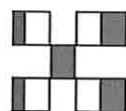
Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.2 | Good | Not Present | | | |
| 2 | 2.3 | Good | Not Present | | | |



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

| | | | | | | | |
|-------------------------|---|-------------------------|---------------------|----------------------|-------------------|----------------------------|-------------|
| Client: | Marathon Gallup Refinery | | | | | | |
| Mailing Address: | 92 Giant Crossing Road
Jamestown, NM,87347

Phone #: 808-640-1823
email or Fax#:
QA/QC Package:
X Standard □ Level 4 (Full Validation)
Accreditation: □ Az Compliance
 □ NELAC □ Other
X EDD (Type) | | | | | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | Cooler Temp(Including CF): | Heal No. |
| 6/30 | 8:30 | | EB-6-30-22 | 14 | | 23-6-1=2.2 | 1.4-6.1=2.3 |
| 6/30 | 9:00 | | OW-14 | 14 | | | 2207002 |
| 6/30 | 9:45 | | GW-BB | 14 | | | |
| 6/30 | - | | DWP-6-30-22 | 14 | | | |
| 6/30 | 9:45 | | FB-6-30-22 | 3 | | | |
| | | | Trip Blank | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Date | Time | Relinquished by: | Received by: | Via: | Date | Time | |
| 6/30/22 | 11:00 | Hila 16 Trip | [Signature] | over | 7/1/22 | 6:50 | |
| Date | Time | Relinquished by: | Received by: | Via: | Date | Time | |
| | | | | | | | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix C-3. 3rd Quarter Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 03, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209A41

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 13 sample(s) on 9/21/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209A41
Date: 11/3/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits. See footnotes.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

Naphthalene, 1-Methylnaphthalene, and 2-Methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample OW-58, OW-58A, OW-63, Dup 9-20-22

Analytical Notes Regarding EPA Method 8015DRO:

The LCS/LCSD had slightly elevated recoveries.

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 8:23:00 AM | R91291 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/23/2022 8:23:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Acetone | 7.0 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 90.4 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 3:56:00 PM | R91223 |
| Surr: Toluene-d8 | 88.5 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 3:56:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 5:30:40 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.027 | 0.016 | 0.064 | JE | mg/L | 1 | 9/26/2022 6:28:51 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/26/2022 6:28:51 PM | 70323 |
| Surr: DNOP | 97.2 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 6:28:51 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Di-n-butyl phthalate | 12 | 7.7 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: 2-Fluorophenol | 18.9 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: Phenol-d5 | 15.0 | 0 | 15-67 | S | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: 2,4,6-Tribromophenol | 32.2 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: Nitrobenzene-d5 | 24.6 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 25.3 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 35.6 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 11:20:25 PM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Pyrene | 0.34 | 0.32 | 1.0 | J | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 11:22:00 AM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** EB-09-20-22**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 8:00:00 AM**Lab ID:** 2209A41-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 23.3 | 0 | 31.6-100 | S | %Rec | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 25.5 | 0 | 26.7-90.1 | S | %Rec | 1 | 9/26/2022 11:22:00 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 31.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 11:22:00 AM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 1:58:13 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 12:59:23 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:19:14 PM | 70359 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:19:14 PM | 70359 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/26/2022 12:19:14 PM | 70359 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:19:14 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 12:02:24 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Chromium | 0.0023 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/5/2022 10:27:11 AM | A91594 |
| Vanadium | 0.0022 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| Zinc | 0.0066 | 0.0032 | 0.010 | J | mg/L | 1 | 9/28/2022 2:45:30 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 1:54:46 PM | B91237 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 1:54:46 PM | B91237 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 1:54:46 PM | B91237 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 1:54:46 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 12:04:29 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 8:00:00 AM

Lab ID: 2209A41-001F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:07:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 26 | 0.45 | 2.5 | | mg/L | 50 | 9/23/2022 8:43:00 AM | R91291 |
| Surr: BFB | 116 | 0 | 70-130 | | %Rec | 50 | 9/23/2022 8:43:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 9000 | 110 | 500 | | µg/L | 500 | 9/22/2022 4:42:00 PM | R91223 |
| Toluene | 43 | 10 | 50 | J | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Ethylbenzene | 1100 | 11 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 23 | 20 | 50 | J | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Isopropylbenzene | 44 | 9.1 | 50 | J | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| n-Butylbenzene | 21 | 13 | 150 | J | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| n-Propylbenzene | 140 | 9.1 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Xylenes, Total | 110 | 19 | 75 | | µg/L | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 95.6 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 92.6 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Surr: Dibromofluoromethane | 96.1 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 5:05:00 PM | R91223 |
| Surr: Toluene-d8 | 91.4 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 5:05:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 5:45:44 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.8 | 0.016 | 0.064 | E | mg/L | 1 | 9/26/2022 6:52:40 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/26/2022 6:52:40 PM | 70323 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 6:52:40 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 1-Methylnaphthalene | 52 | 4.3 | 5.0 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 2-Methylnaphthalene | 74 | 4.2 | 5.0 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Naphthalene | 180 | 3.2 | 5.0 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Phenol | 25 | 18 | 20 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: 2-Fluorophenol | 43.1 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: Phenol-d5 | 34.5 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: 2,4,6-Tribromophenol | 65.7 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: Nitrobenzene-d5 | 53.9 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 54.5 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 71.7 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 12:02:41 AM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.2 | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Acenaphthene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Fluorene | 1.2 | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Phenanthrene | 0.92 | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 12:05:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-63**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 10:15:00 AM**Lab ID:** 2209A41-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 54.3 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 45.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 12:05:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 52.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 12:05:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 4.4 | 0.0079 | 0.015 | * | mg/L | 5 | 9/23/2022 1:14:01 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Nickel | 0.033 | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 1:59:53 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 1:05:40 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:21:41 PM | 70359 |
| Arsenic | 0.0072 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:21:41 PM | 70359 |
| Lead | 0.000087 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/26/2022 12:21:41 PM | 70359 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:21:41 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 12:06:36 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 4.4 | 0.0056 | 0.010 | * | mg/L | 5 | 9/28/2022 2:51:24 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Nickel | 0.028 | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Silver | 0.0015 | 0.0013 | 0.0050 | J | mg/L | 1 | 10/5/2022 10:32:04 AM | A91594 |
| Vanadium | 0.0045 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 2:49:34 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:02:50 PM | B91237 |
| Arsenic | 0.0071 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:02:50 PM | B91237 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:02:50 PM | B91237 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:02:50 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 12:08:42 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:15:00 AM

Lab ID: 2209A41-003F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.0120 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:10:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 58 | 0.18 | 1.0 | | mg/L | 20 | 9/23/2022 9:03:00 AM | R91291 |
| Surr: BFB | 171 | 0 | 70-130 | S | %Rec | 20 | 9/23/2022 9:03:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 8900 | 45 | 200 | | µg/L | 200 | 9/22/2022 5:51:00 PM | R91223 |
| Toluene | 6300 | 40 | 200 | | µg/L | 200 | 9/22/2022 5:51:00 PM | R91223 |
| Ethylbenzene | 1000 | 4.3 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 2200 | 7.9 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | 780 | 2.4 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | 210 | 3.6 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 5.1 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Acetone | ND | 50 | 200 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Bromomethane | ND | 17 | 60 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 2-Butanone | ND | 41 | 200 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Carbon disulfide | ND | 12 | 200 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Chlorobenzene | ND | 3.1 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Chloroform | ND | 2.7 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Chloromethane | ND | 8.2 | 60 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| cis-1,2-DCE | ND | 7.8 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 5.5 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 4.0 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Isopropylbenzene | 71 | 3.7 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 4-Isopropyltoluene | 13 | 4.0 | 20 | J | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Methylene Chloride | ND | 10 | 60 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| n-Butylbenzene | 19 | 5.1 | 60 | J | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| n-Propylbenzene | 130 | 3.6 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| sec-Butylbenzene | 16 | 2.9 | 20 | J | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Styrene | ND | 2.7 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 7.1 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 6.0 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 4.1 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Vinyl chloride | ND | 6.4 | 20 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Xylenes, Total | 4300 | 7.4 | 30 | | µg/L | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 94.0 | 0 | 70-130 | | %Rec | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 92.0 | 0 | 70-130 | | %Rec | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Surr: Dibromofluoromethane | 91.8 | 0 | 70-130 | | %Rec | 20 | 9/22/2022 6:15:00 PM | R91223 |
| Surr: Toluene-d8 | 92.6 | 0 | 70-130 | | %Rec | 20 | 9/22/2022 6:15:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 6:00:55 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 16 | 0.080 | 0.32 | E | mg/L | 5 | 9/27/2022 11:59:36 AM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.26 | 0.40 | E,D | mg/L | 5 | 9/27/2022 11:59:36 AM | 70323 |
| Surr: DNOP | 125 | 0 | 42.2-138 | | %Rec | 5 | 9/27/2022 11:59:36 AM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 2,4-Dimethylphenol | 6.5 | 5.8 | 10 | J | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 1-Methylnaphthalene | 76 | 4.3 | 5.0 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 2-Methylnaphthalene | 87 | 4.2 | 5.0 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 2-Methylphenol | 11 | 5.0 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 3+4-Methylphenol | 5.4 | 5.1 | 10 | J | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Naphthalene | 160 | 3.2 | 5.0 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Phenol | 22 | 18 | 20 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | S | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: Phenol-d5 | 34.8 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: 2,4,6-Tribromophenol | 65.8 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: Nitrobenzene-d5 | 54.7 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 56.0 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 68.1 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 12:45:01 AM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Acenaphthene | 2.6 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Fluorene | 4.7 | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Phenanthrene | 5.8 | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Anthracene | 0.66 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Fluoranthene | 0.50 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Pyrene | 0.58 | 0.32 | 1.0 | J | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Benz(a)anthracene | 0.20 | 0.15 | 0.30 | J | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 12:49:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-58A**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 10:45:00 AM**Lab ID:** 2209A41-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 8270SIM | | | | | | | | Analyst: TOM |
| Surr: Nitrobenzene-d5 | 56.8 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 43.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 12:49:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 49.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 12:49:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 1.1 | 0.0079 | 0.015 | | mg/L | 5 | 9/23/2022 1:20:24 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Chromium | 0.0045 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Nickel | 0.037 | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:01:20 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 1:18:26 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:29:02 PM | 70359 |
| Arsenic | 0.0047 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:29:02 PM | 70359 |
| Lead | 0.012 | 0.000061 | 0.00050 | | mg/L | 1 | 9/26/2022 12:29:02 PM | 70359 |
| Selenium | 0.00081 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/26/2022 12:29:02 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:03:46 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.92 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Nickel | 0.038 | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/29/2022 1:47:41 PM | A91423 |
| Vanadium | 0.0059 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 2:55:47 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:05:32 PM | B91237 |
| Arsenic | 0.0036 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:05:32 PM | B91237 |
| Lead | 0.0012 | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:05:32 PM | B91237 |
| Selenium | 0.00042 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/22/2022 2:05:32 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:05:53 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 10:45:00 AM

Lab ID: 2209A41-004F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:13:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 67 | 0.45 | 2.5 | | mg/L | 50 | 9/23/2022 9:22:00 AM | R91291 |
| Surr: BFB | 115 | 0 | 70-130 | | %Rec | 50 | 9/23/2022 9:22:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 31000 | 110 | 500 | | µg/L | 500 | 9/22/2022 7:01:00 PM | R91223 |
| Toluene | 42 | 10 | 50 | J | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Ethylbenzene | 1200 | 11 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 1000 | 20 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | 8.6 | 6.1 | 50 | J | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Isopropylbenzene | 28 | 9.1 | 50 | J | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| n-Butylbenzene | 14 | 13 | 150 | J | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| n-Propylbenzene | 91 | 9.1 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Xylenes, Total | 130 | 19 | 75 | | µg/L | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 94.7 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Surr: Dibromofluoromethane | 93.8 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 7:24:00 PM | R91223 |
| Surr: Toluene-d8 | 91.6 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 7:24:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/22/2022 6:16:00 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 7.3 | 0.032 | 0.13 | E | mg/L | 2 | 9/27/2022 12:23:15 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.10 | 0.16 | E,D | mg/L | 2 | 9/27/2022 12:23:15 PM | 70323 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 2 | 9/27/2022 12:23:15 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 1-Methylnaphthalene | 69 | 4.3 | 5.0 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 2-Methylnaphthalene | 79 | 4.2 | 5.0 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Naphthalene | 140 | 3.2 | 5.0 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Phenol | 74 | 18 | 20 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: 2-Fluorophenol | 49.4 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: Phenol-d5 | 44.1 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: 2,4,6-Tribromophenol | 62.6 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: Nitrobenzene-d5 | 66.6 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 60.7 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 72.5 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 1:27:06 AM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.5 | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Acenaphthene | 2.5 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Fluorene | 3.3 | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Phenanthrene | 2.9 | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Anthracene | 0.36 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Fluoranthene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 1:33:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 65.5 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 49.0 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 1:33:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 50.4 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 1:33:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 5.0 | 0.0079 | 0.015 | * | mg/L | 5 | 9/23/2022 1:26:42 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Cadmium | 0.0020 | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Nickel | 0.050 | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:02:47 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Vanadium | 0.0045 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 1:24:42 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:31:28 PM | 70359 |
| Arsenic | 0.0032 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:31:28 PM | 70359 |
| Lead | 0.00020 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/26/2022 12:31:28 PM | 70359 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:31:28 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:08:00 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 4.8 | 0.0056 | 0.010 | * | mg/L | 5 | 9/28/2022 3:16:07 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Nickel | 0.046 | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Silver | 0.0013 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/29/2022 1:49:32 PM | A91423 |
| Vanadium | 0.0050 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| Zinc | 0.0059 | 0.0032 | 0.010 | J | mg/L | 1 | 9/28/2022 3:14:07 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:13:38 PM | B91237 |
| Arsenic | 0.0032 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:13:38 PM | B91237 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:13:38 PM | B91237 |
| Selenium | 0.00044 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/22/2022 2:13:38 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/26/2022 1:10:08 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:05:00 AM

Lab ID: 2209A41-005F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|---------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.00570 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:14:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:30:00 AM

Lab ID: 2209A41-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.52 | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 9:42:00 AM | R91291 |
| Surr: BFB | 278 | 0 | 70-130 | S | %Rec | 1 | 9/23/2022 9:42:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 45 | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Toluene | 0.71 | 0.20 | 1.0 | J | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Ethylbenzene | 53 | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | 57 | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | 1.2 | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Acetone | 9.0 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Isopropylbenzene | 11 | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 4-Isopropyltoluene | 1.0 | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| n-Propylbenzene | 4.7 | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| sec-Butylbenzene | 3.3 | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Xylenes, Total | 7.9 | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 99.2 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 91.5 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Surr: Dibromofluoromethane | 99.2 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:10:00 PM | R91223 |
| Surr: Toluene-d8 | 88.8 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:10:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-64**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 11:30:00 AM**Lab ID:** 2209A41-006B**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 6:31:07 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:30:00 AM

Lab ID: 2209A41-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.57 | 0.016 | 0.064 | E | mg/L | 1 | 9/26/2022 8:51:20 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/26/2022 8:51:20 PM | 70323 |
| Surr: DNOP | 93.1 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 8:51:20 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: 2-Fluorophenol | 42.1 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: Phenol-d5 | 33.4 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: 2,4,6-Tribromophenol | 61.7 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: Nitrobenzene-d5 | 57.3 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 57.2 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 70.6 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 11:07:13 AM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Naphthalene | 2.7 | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| 1-Methylnaphthalene | 1.1 | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| 2-Methylnaphthalene | 0.38 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Acenaphthene | 0.16 | 0.14 | 0.30 | J | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Fluorene | 0.32 | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Phenanthrene | 0.64 | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Anthracene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Fluoranthene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Pyrene | 0.36 | 0.32 | 1.0 | J | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 2:17:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-64**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 11:30:00 AM**Lab ID:** 2209A41-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 54.4 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 46.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 2:17:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 50.6 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 2:17:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:30:00 AM

Lab ID: 2209A41-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:09:20 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Vanadium | 0.0068 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 1:30:50 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:33:55 PM | 70359 |
| Arsenic | 0.0024 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:33:55 PM | 70359 |
| Lead | 0.00039 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/26/2022 12:33:55 PM | 70359 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:33:55 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/26/2022 1:12:15 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:30:00 AM

Lab ID: 2209A41-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.24 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/29/2022 1:51:27 PM | A91423 |
| Vanadium | 0.0074 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| Zinc | 0.038 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 3:27:44 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:16:20 PM | B91237 |
| Arsenic | 0.0026 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:16:20 PM | B91237 |
| Lead | 0.000065 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/22/2022 2:16:20 PM | B91237 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:16:20 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/26/2022 1:14:24 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:30:00 AM

Lab ID: 2209A41-006F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:15:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:40:00 AM

Lab ID: 2209A41-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 10:02:00 AM | R91291 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/23/2022 10:02:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Acetone | 7.1 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 87.9 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:33:00 PM | R91223 |
| Surr: Toluene-d8 | 86.9 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:33:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:40:00 AM

Lab ID: 2209A41-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/23/2022 9:54:00 AM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:40:00 AM

Lab ID: 2209A41-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.16 | 0.016 | 0.064 | E | mg/L | 1 | 9/26/2022 9:15:04 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/26/2022 9:15:04 PM | 70323 |
| Surr: DNOP | 98.1 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 9:15:04 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: 2-Fluorophenol | 45.0 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: Phenol-d5 | 36.5 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: 2,4,6-Tribromophenol | 52.6 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: Nitrobenzene-d5 | 59.5 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: 2-Fluorobiphenyl | 57.2 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| Surr: 4-Terphenyl-d14 | 67.4 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 11:48:35 AM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 3:01:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** STP-1-NW**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 11:40:00 AM**Lab ID:** 2209A41-007C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 57.2 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 50.9 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 3:01:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 54.3 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 3:01:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:40:00 AM

Lab ID: 2209A41-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 200.7: METALS | | | | | | | | Analyst: VP |
| Barium | 0.090 | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Cadmium | 0.0024 | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:11:02 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Vanadium | 0.033 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| Zinc | 0.011 | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 1:56:45 PM | 70359 |
| EPA 200.8: METALS | | | | | | | | Analyst: bcv |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:36:21 PM | 70359 |
| Arsenic | 0.0024 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:36:21 PM | 70359 |
| Lead | 0.00088 | 0.000061 | 0.00050 | | mg/L | 1 | 9/26/2022 12:36:21 PM | 70359 |
| Selenium | 0.0050 | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:36:21 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | | Analyst: VP |
| Mercury | 0.00025 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:16:33 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:40:00 AM

Lab ID: 2209A41-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|--------------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | | Analyst: JRR |
| Barium | 0.065 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/29/2022 1:53:30 PM | A91423 |
| Vanadium | 0.039 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 3:31:45 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | | Analyst: bcv |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:19:01 PM | B91237 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:19:01 PM | B91237 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:19:01 PM | B91237 |
| Selenium | 0.0059 | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:19:01 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | | Analyst: VP |
| Mercury | 0.00024 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:18:40 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: 2209A41
Date Reported: 11/3/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter
Lab ID: 2209A41-007F

Client Sample ID: STP-1-NW
Collection Date: 9/20/2022 11:40:00 AM
Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.0550 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:16:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 10:21:00 AM | R91291 |
| Surr: BFB | 189 | 0 | 70-130 | S | %Rec | 1 | 9/23/2022 10:21:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Acetone | 5.0 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 99.7 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Surr: Dibromofluoromethane | 107 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:56:00 PM | R91223 |
| Surr: Toluene-d8 | 87.1 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 8:56:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/22/2022 7:01:30 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.097 | 0.016 | 0.064 | E | mg/L | 1 | 9/26/2022 9:38:48 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/26/2022 9:38:48 PM | 70323 |
| Surr: DNOP | 88.1 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 9:38:48 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: 2-Fluorophenol | 52.1 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: Phenol-d5 | 41.5 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: 2,4,6-Tribromophenol | 59.4 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: Nitrobenzene-d5 | 65.9 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 64.0 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 70.3 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 12:29:57 PM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.26 | 0.11 | 1.0 | J | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 3:45:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-60**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 11:55:00 AM**Lab ID:** 2209A41-008C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 59.8 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 54.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 3:45:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 59.3 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 3:45:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.34 | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Beryllium | 0.0012 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Cadmium | 0.0020 | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Chromium | 0.026 | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Cobalt | 0.0076 | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Nickel | 0.023 | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:12:45 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Vanadium | 0.042 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| Zinc | 0.018 | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 2:02:48 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:38:48 PM | 70359 |
| Arsenic | 0.0029 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:38:48 PM | 70359 |
| Lead | 0.0069 | 0.000061 | 0.00050 | | mg/L | 1 | 9/26/2022 12:38:48 PM | 70359 |
| Selenium | 0.018 | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:38:48 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00048 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:20:46 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.027 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Chromium | 0.0046 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Nickel | 0.0038 | 0.0033 | 0.010 | J | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Silver | 0.0021 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/29/2022 1:55:28 PM | A91423 |
| Vanadium | 0.013 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 3:35:56 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:21:42 PM | B91237 |
| Arsenic | 0.0014 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:21:42 PM | B91237 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:21:42 PM | B91237 |
| Selenium | 0.016 | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:21:42 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00024 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:22:53 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 11:55:00 AM

Lab ID: 2209A41-008F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|---------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.00639 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:17:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.84 | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 10:41:00 AM | R91291 |
| Surr: BFB | 3180 | 0 | 70-130 | S | %Rec | 1 | 9/23/2022 10:41:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 7.7 | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Toluene | 0.80 | 0.20 | 1.0 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Ethylbenzene | 4.7 | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 0.60 | 0.39 | 1.0 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | 1.9 | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Acetone | 7.2 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Isopropylbenzene | 1.2 | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 4-Isopropyltoluene | 0.24 | 0.20 | 1.0 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| n-Butylbenzene | 0.66 | 0.25 | 3.0 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| n-Propylbenzene | 2.2 | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| sec-Butylbenzene | 0.60 | 0.14 | 1.0 | J | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Xylenes, Total | 3.7 | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 92.6 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:19:00 PM | R91223 |
| Surr: Toluene-d8 | 89.4 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:19:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 7:16:42 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 1.5 | 0.016 | 0.064 | E | mg/L | 1 | 9/27/2022 1:58:07 PM | 70376 |
| Motor Oil Range Organics (MRO) | 0.076 | 0.052 | 0.080 | JE | mg/L | 1 | 9/27/2022 1:58:07 PM | 70376 |
| Surr: DNOP | 95.7 | 0 | 42.2-138 | | %Rec | 1 | 9/27/2022 1:58:07 PM | 70376 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: 2-Fluorophenol | 2.59 | 0 | 15-84.5 | S | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: Phenol-d5 | 10.2 | 0 | 15-67 | S | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: 2,4,6-Tribromophenol | 2.97 | 0 | 15-108 | S | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: Nitrobenzene-d5 | 60.3 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 61.3 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 72.6 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 1:11:41 PM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 5.4 | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Acenaphthene | 0.60 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Fluorene | 0.18 | 0.095 | 0.30 | J | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 4:29:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-68**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 12:10:00 PM**Lab ID:** 2209A41-009C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 58.5 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 51.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 4:29:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 54.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 4:29:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.26 | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Beryllium | 0.0011 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Cadmium | 0.0043 | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Chromium | 0.0092 | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Cobalt | 0.061 | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Nickel | 0.17 | 0.0053 | 0.010 | * | mg/L | 1 | 9/26/2022 2:14:12 PM | 70359 |
| Silver | 0.0059 | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Vanadium | 0.031 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| Zinc | 0.013 | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 2:08:39 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:41:14 PM | 70359 |
| Arsenic | 0.018 | 0.00013 | 0.0010 | * | mg/L | 1 | 9/26/2022 12:41:14 PM | 70359 |
| Lead | 0.020 | 0.00031 | 0.0025 | * | mg/L | 5 | 9/26/2022 1:33:54 PM | 70359 |
| Selenium | 0.0080 | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:41:14 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00025 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:29:13 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.050 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Cobalt | 0.061 | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Nickel | 0.16 | 0.0033 | 0.010 | * | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Silver | 0.0087 | 0.0013 | 0.0050 | | mg/L | 1 | 9/29/2022 1:57:44 PM | A91423 |
| Vanadium | 0.016 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| Zinc | 0.036 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 3:48:06 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:24:23 PM | B91237 |
| Arsenic | 0.016 | 0.00012 | 0.0010 | * | mg/L | 1 | 9/22/2022 2:24:23 PM | B91237 |
| Lead | 0.013 | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:24:23 PM | B91237 |
| Selenium | 0.0053 | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:24:23 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00027 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:31:21 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:10:00 PM

Lab ID: 2209A41-009F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.0115 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:18:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.12 | 0.0090 | 0.050 | | mg/L | 1 | 9/23/2022 11:00:00 AM | R91291 |
| Surr: BFB | 1060 | 0 | 70-130 | S | %Rec | 1 | 9/23/2022 11:00:00 AM | R91291 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 33 | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 97.2 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:42:00 PM | R91223 |
| Surr: Toluene-d8 | 85.6 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 9:42:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 7:31:50 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.73 | 0.016 | 0.064 | E | mg/L | 1 | 9/27/2022 2:21:57 PM | 70376 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/27/2022 2:21:57 PM | 70376 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 9/27/2022 2:21:57 PM | 70376 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: 2-Fluorophenol | 0.299 | 0 | 15-84.5 | S | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: Phenol-d5 | 0.653 | 0 | 15-67 | S | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | S | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: Nitrobenzene-d5 | 65.5 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 65.9 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 76.7 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 1:53:17 PM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 4.7 | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 5:13:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OW-67**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022 12:20:00 PM**Lab ID:** 2209A41-010C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 62.0 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 54.7 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 5:13:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 57.6 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 5:13:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|---------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.28 | 0.0016 | 0.0030 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Beryllium | 0.0014 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Cadmium | 0.0042 | 0.0018 | 0.0020 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Chromium | 0.012 | 0.0020 | 0.0060 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Nickel | 0.13 | 0.0053 | 0.010 | * | mg/L | 1 | 9/26/2022 2:15:38 PM | 70359 |
| Silver | 0.015 | 0.0018 | 0.0050 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Vanadium | 0.030 | 0.0035 | 0.050 | J | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| Zinc | 0.011 | 0.0039 | 0.010 | | mg/L | 1 | 9/23/2022 3:47:00 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 9/26/2022 1:36:20 PM | 70359 |
| Arsenic | 0.0040 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:43:41 PM | 70359 |
| Lead | 0.0080 | 0.00031 | 0.0025 | | mg/L | 5 | 9/26/2022 1:36:20 PM | 70359 |
| Selenium | 0.0016 | 0.00037 | 0.0010 | | mg/L | 1 | 9/26/2022 12:43:41 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 9/26/2022 2:46:16 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.051 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Nickel | 0.12 | 0.0033 | 0.010 | * | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Silver | 0.020 | 0.0013 | 0.0050 | | mg/L | 1 | 9/29/2022 1:59:51 PM | A91423 |
| Vanadium | 0.0068 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| Zinc | 0.035 | 0.0032 | 0.010 | | mg/L | 1 | 9/28/2022 3:52:11 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:27:04 PM | B91237 |
| Arsenic | 0.0027 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:27:04 PM | B91237 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 9/22/2022 2:59:23 PM | B91237 |
| Selenium | 0.00095 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/22/2022 2:27:04 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:39:54 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-010F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | 0.0373 | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:19:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022 12:20:00 PM

Lab ID: 2209A41-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Acetone | 11 | 2.5 | 10 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 89.8 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 10:05:00 PM | R91223 |
| Surr: Toluene-d8 | 86.4 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 10:05:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022

Lab ID: 2209A41-012A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 46 | 0.45 | 2.5 | | mg/L | 50 | 9/26/2022 3:16:00 PM | A91300 |
| Surr: BFB | 125 | 0 | 70-130 | | %Rec | 50 | 9/26/2022 3:16:00 PM | A91300 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 8700 | 110 | 500 | | µg/L | 500 | 9/22/2022 10:28:00 PM | R91223 |
| Toluene | 4600 | 10 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Ethylbenzene | 840 | 11 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | 2200 | 20 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | 520 | 6.1 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | 140 | 9.1 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Isopropylbenzene | 58 | 9.1 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 4-Isopropyltoluene | 12 | 10 | 50 | J | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| n-Butylbenzene | 19 | 13 | 150 | J | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| n-Propylbenzene | 110 | 9.1 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| sec-Butylbenzene | 14 | 7.2 | 50 | J | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Xylenes, Total | 3100 | 19 | 75 | | µg/L | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 94.5 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 92.2 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Surr: Dibromofluoromethane | 93.2 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 10:51:00 PM | R91223 |
| Surr: Toluene-d8 | 93.0 | 0 | 70-130 | | %Rec | 50 | 9/22/2022 10:51:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022

Lab ID: 2209A41-012B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 8:02:18 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022

Lab ID: 2209A41-012C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 4.4 | 0.16 | 0.64 | E | mg/L | 10 | 9/28/2022 11:00:37 AM | 70376 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | E,D | mg/L | 10 | 9/28/2022 11:00:37 AM | 70376 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 9/28/2022 11:00:37 AM | 70376 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 2,4-Dimethylphenol | 7.7 | 5.8 | 10 | J | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 1-Methylnaphthalene | 64 | 4.3 | 5.0 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 2-Methylnaphthalene | 71 | 4.2 | 5.0 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 2-Methylphenol | 8.5 | 5.0 | 10 | J | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Naphthalene | 130 | 3.2 | 5.0 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: 2-Fluorophenol | 38.2 | 0 | 15-84.5 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: Phenol-d5 | 31.3 | 0 | 15-67 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: 2,4,6-Tribromophenol | 60.0 | 0 | 15-108 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: Nitrobenzene-d5 | 48.8 | 0 | 16.8-112 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 48.9 | 0 | 15-101 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 69.4 | 0 | 34.4-134 | | %Rec | 1 | 9/29/2022 2:34:44 PM | 70340 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Acenaphthene | 2.3 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Fluorene | 3.9 | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Phenanthrene | 4.5 | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Anthracene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Fluoranthene | 0.34 | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Pyrene | 0.38 | 0.32 | 1.0 | J | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 5:58:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2209A41**Date Reported: **11/3/2022****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** DUP 9-20-22**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/20/2022**Lab ID:** 2209A41-012C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 8270SIM | | | | | | | | Analyst: TOM |
| Surr: Nitrobenzene-d5 | 50.9 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Surr: 2-Fluorobiphenyl | 39.9 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 5:58:00 PM | 70340 |
| Surr: 4-Terphenyl-d14 | 49.7 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 5:58:00 PM | 70340 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022

Lab ID: 2209A41-012D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 1.1 | 0.0079 | 0.015 | | mg/L | 5 | 9/23/2022 3:55:21 PM | 70359 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Chromium | 0.0037 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Cobalt | 0.0086 | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 10:49:41 AM | 70359 |
| Nickel | 0.037 | 0.0053 | 0.010 | | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Vanadium | 0.020 | 0.0035 | 0.050 | J | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| Zinc | 0.013 | 0.0039 | 0.010 | | mg/L | 1 | 9/26/2022 2:17:04 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 12:46:07 PM | 70359 |
| Arsenic | 0.0050 | 0.00013 | 0.0010 | | mg/L | 1 | 9/26/2022 12:46:07 PM | 70359 |
| Lead | 0.0089 | 0.000061 | 0.00050 | | mg/L | 1 | 9/26/2022 12:46:07 PM | 70359 |
| Selenium | 0.00070 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/26/2022 12:46:07 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:42:03 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-20-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/20/2022

Lab ID: 2209A41-012E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.90 | 0.0011 | 0.0020 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Nickel | 0.035 | 0.0033 | 0.010 | | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/29/2022 2:02:01 PM | A91423 |
| Vanadium | 0.0045 | 0.0017 | 0.050 | J | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| Zinc | 0.0099 | 0.0032 | 0.010 | J | mg/L | 1 | 9/28/2022 3:56:34 PM | B91392 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/22/2022 2:29:46 PM | B91237 |
| Arsenic | 0.0037 | 0.00012 | 0.0010 | | mg/L | 1 | 9/22/2022 2:29:46 PM | B91237 |
| Lead | 0.0011 | 0.000057 | 0.00050 | | mg/L | 1 | 9/22/2022 2:29:46 PM | B91237 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/22/2022 2:29:46 PM | B91237 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:44:13 PM | 70390 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209A41-012F

Client Sample ID: DUP 9-20-22

Collection Date: 9/20/2022

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PACE | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 9/28/2022 7:20:00 PM | R92219 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209A41-013A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Acetone | 6.8 | 2.5 | 10 | J | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Surr: 4-Bromofluorobenzene | 89.0 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 4:19:00 PM | R91223 |
| Surr: Toluene-d8 | 87.5 | 0 | 70-130 | | %Rec | 1 | 9/22/2022 4:19:00 PM | R91223 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2209A41

Date Reported: 11/3/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209A41-013B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 9/22/2022 8:32:35 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



ANALYTICAL REPORT

September 28, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1538426

Samples Received: 09/22/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 5 | |
| Sr: Sample Results | 6 | <div><div>3</div>Ss</div> |
| 2209A41-001F EB-09-20-22 L1538426-01 | 6 | |
| 2209A41-003F OW-63 L1538426-02 | 7 | <div><div>4</div>Cn</div> |
| 2209A41-004F OW-58A L1538426-03 | 8 | |
| 2209A41-005F OW-58 L1538426-04 | 9 | <div><div>5</div>Sr</div> |
| 2209A41-006F OW-64 L1538426-05 | 10 | |
| 2209A41-007F STP-1-NW L1538426-06 | 11 | <div><div>6</div>Qc</div> |
| 2209A41-008F OW-60 L1538426-07 | 12 | |
| 2209A41-009F OW-68 L1538426-08 | 13 | <div><div>7</div>Gl</div> |
| 2209A41-010F OW-67 L1538426-09 | 14 | |
| 2209A41-012F DUP-9-20-22 L1538426-10 | 15 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 16 | |
| Wet Chemistry by Method 4500CN E-2016 | 16 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 17 | |
| Al: Accreditations & Locations | 18 | |
| Sc: Sample Chain of Custody | 19 | |

2209A41-001F EB-09-20-22 L1538426-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:07 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2209A41-003F OW-63 L1538426-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:10 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-004F OW-58A L1538426-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:13 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-005F OW-58 L1538426-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:14 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-006F OW-64 L1538426-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:15 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-007F STP-1-NW L1538426-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:16 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-008F OW-60 L1538426-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:17 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209A41-009F OW-68 L1538426-08 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:18 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

SAMPLE SUMMARY

2209A41-010F OW-67 L1538426-09 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:19 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2209A41-012F DUP-9-20-22 L1538426-10 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1930995 | 1 | 09/27/22 02:15 | 09/28/22 19:20 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/28/2022 19:07 | WG1930995 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0120 | | 0.00500 | 1 | 09/28/2022 19:10 | WG1930995 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 09/20/22 10:45

L1538426

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/28/2022 19:13 | WG1930995 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00570 | | 0.00500 | 1 | 09/28/2022 19:14 | WG1930995 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/28/2022 19:15 | WG1930995 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 09/20/22 11:40

L1538426

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 0.0550 | | 0.00500 | 1 | 09/28/2022 19:16 | WG1930995 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00639 | | 0.00500 | 1 | 09/28/2022 19:17 | WG1930995 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0115 | | 0.00500 | 1 | 09/28/2022 19:18 | WG1930995 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 09/20/22 12:20

L1538426

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0373 | | 0.00500 | 1 | 09/28/2022 19:19 | WG1930995 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/28/2022 19:20 | WG1930995 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1538426-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3842543-1 09/28/22 18:48

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1538259-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1538259-02 09/28/22 18:54 • (DUP) R3842543-3 09/28/22 18:56

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | 0.00518 | 1 | 5.15 | 20 |

L1538387-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1538387-02 09/28/22 19:03 • (DUP) R3842543-6 09/28/22 19:04

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 200 | P1 20 |

Laboratory Control Sample (LCS)

(LCS) R3842543-2 09/28/22 18:49

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0987 | 98.7 | 87.1-120 | |

L1538379-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1538379-01 09/28/22 18:58 • (MS) R3842543-4 09/28/22 19:01 • (MSD) R3842543-5 09/28/22 19:02

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0969 | 0.0970 | 96.9 | 97.0 | 1 | 90.0-110 | | | 0.103 | 20 |

L1538426-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1538426-01 09/28/22 19:07 • (MS) R3842543-7 09/28/22 19:08 • (MSD) R3842543-8 09/28/22 19:09

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0971 | 0.0974 | 97.1 | 97.4 | 1 | 90.0-110 | | | 0.308 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

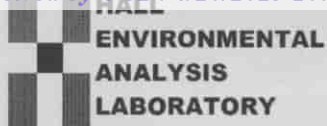
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 2685 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

G125

| | | | |
|---|-------------------------|------------------------------|----------------------------|
| SUB CONTRACTOR: Pace TN | COMPANY: PACE TN | PHONE: (800) 767-5859 | FAX: (615) 758-5859 |
| ADDRESS: 12065 Lebanon Rd | | ACCOUNT #: | EMAIL: |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|-----------------------------------|
| 1 | 2209A41-001F | EB-09-20-22 | 500AMBHDP | Groundw | 9/20/2022 8:00:00 AM | 1 | Total Cyanide J and MDL <i>21</i> |
| 2 | 2209A41-003F | OW-63 | 500AMBHDP | Groundw | 9/20/2022 10:15:00 AM | 1 | Total Cyanide J and MDL <i>22</i> |
| 3 | 2209A41-004F | OW-58A | 500AMBHDP | Groundw | 9/20/2022 10:45:00 AM | 1 | Total Cyanide J and MDL <i>23</i> |
| 4 | 2209A41-005F | OW-58 | 500AMBHDP | Groundw | 9/20/2022 11:05:00 AM | 1 | Total Cyanide J and MDL <i>24</i> |
| 5 | 2209A41-006F | OW-64 | 500AMBHDP | Groundw | 9/20/2022 11:30:00 AM | 1 | Total Cyanide J and MDL <i>25</i> |
| 6 | 2209A41-007F | STP-1-NW | 500AMBHDP | Groundw | 9/20/2022 11:40:00 AM | 1 | Total Cyanide J and MDL <i>26</i> |
| 7 | 2209A41-008F | OW-60 | 500AMBHDP | Groundw | 9/20/2022 11:55:00 AM | 1 | Total Cyanide J and MDL <i>27</i> |
| 8 | 2209A41-009F | OW-68 | 500AMBHDP | Groundw | 9/20/2022 12:10:00 PM | 1 | Total Cyanide J and MDL <i>28</i> |
| 9 | 2209A41-010F | OW-67 | 500AMBHDP | Groundw | 9/20/2022 12:20:00 PM | 1 | Total Cyanide J and MDL <i>29</i> |
| 10 | 2209A41-012F | DUP 9-20-22 | 500AMBHDP | Groundw | 9/20/2022 | 1 | Total Cyanide J and MDL <i>30</i> |

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

2.0x0.2.0 NSAQ

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|---|------------------------|----------------------|---------------------------------|------------------------|----------------------|---|
| Relinquished By: <i>Cme</i> | Date: 9/21/2022 | Time: 9:07 AM | Received By: <i>[Signature]</i> | Date: 9/21/2022 | Time: 9:07 AM | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |



November 02, 2022

Vista Work Order No. 2209182

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on September 22, 2022 under your Project Name '2209A41'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at kvolpendesta@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Karen L. Volpendesta
Project Manager



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 2209182

Case Narrative

Sample Condition on Receipt:

Two aqueous samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements.

Analytical Notes:

PFAS Isotope Dilution Method

The samples were extracted and analyzed for a selected list of PFAS using Vista's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted outside of the hold time.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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| Qualifiers..... | 14 |
| Certifications..... | 15 |
| Sample Receipt..... | 18 |



Sample Inventory Report

| Vista
Sample ID | Client
Sample ID | Sampled | Received | Components/Containers |
|--------------------|---------------------|-----------------|-----------------|-----------------------|
| 2209182-01 | EB-09-20-22 | 20-Sep-22 12:40 | 22-Sep-22 09:49 | HDPE Bottle, 250 mL |
| | | | | HDPE Bottle, 250 mL |
| 2209182-02 | OW-63 | 20-Sep-22 10:15 | 22-Sep-22 09:49 | HDPE Bottle, 250 mL |
| | | | | HDPE Bottle, 250 mL |

ANALYTICAL RESULTS

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | |
|-------------------------|--|--------------|----------|-----------------|------------------------------|-----------|-----------|-----------------|----------|
| Client Data | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22J201-BLK1 | Column: | BEH C18 | | |
| Project: | 2209A41 | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFPeA | 2706-90-3 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFBS | 375-73-5 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 4:2 FTS | 757124-72-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFHxA | 307-24-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFPeS | 2706-91-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFHpA | 375-85-9 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFHxS | 355-46-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFOA | 335-67-1 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFHpS | 375-92-8 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFNA | 375-95-1 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFOSA | 754-91-6 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFOS | 1763-23-1 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFDA | 335-76-2 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFNS | 68259-12-1 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| MeFOSAA | 2355-31-9 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| EtFOSAA | 2991-50-6 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFUnA | 2058-94-8 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFDS | 335-77-3 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFDoA | 307-55-1 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFTTrDA | 72629-94-8 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| PFTeDA | 376-06-7 | ND | 2.00 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 112 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C3-PFPeA | IS | 116 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C3-PFBS | IS | 118 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C2-4:2 FTS | IS | 116 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C2-PFHxA | IS | 124 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C4-PFHpA | IS | 114 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C3-PFHxS | IS | 104 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C2-6:2 FTS | IS | 108 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C2-PFOA | IS | 109 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C5-PFNA | IS | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C8-PFOSA | IS | 93.8 | 10 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C8-PFOS | IS | 108 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |
| 13C2-PFDA | IS | 114 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 |

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | | |
|---|------|------------|----------|---|------------------------------|-----------|-----------|-----------------|----------|--|
| Client Data

Name: Hall Environmental Analytical Laboratory Matrix: Aqueous
Project: 2209A41 | | | | Laboratory Data

Lab Sample: B22J201-BLK1 Column: BEH C18 | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-8:2 FTS | IS | 107 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |
| d3-MeFOSAA | IS | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |
| d5-EtFOSAA | IS | 93.1 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |
| 13C2-PFUnA | IS | 95.2 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |
| 13C2-PFDoA | IS | 77.2 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |
| 13C2-PFTeDA | IS | 67.6 | 20 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:49 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR

PFAS Isotope Dilution Method

| Client Data | | | | | | Laboratory Data | | | | | |
|-------------------|--|------------------|-----------|-------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: Project: | Hall Environmental Analytical Laboratory 2209A41 | Matrix: | Aqueous | | | Lab Sample: | B22J201-BS1 | Column: | BEH C18 | | |
| Analyte | CAS Number | Amt Found (ng/L) | Spike Amt | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 36.2 | 40.0 | 90.4 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFPeA | 2706-90-3 | 40.8 | 40.0 | 102 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFBS | 375-73-5 | 30.2 | 40.4 | 74.7 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 4:2 FTS | 757124-72-4 | 40.6 | 40.0 | 102 | 60 - 145 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFHxA | 307-24-4 | 41.6 | 40.0 | 104 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFPeS | 2706-91-4 | 37.1 | 40.4 | 91.9 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFHpA | 375-85-9 | 36.9 | 40.0 | 92.2 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFHxS | 355-46-4 | 37.6 | 40.0 | 93.9 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 6:2 FTS | 27619-97-2 | 28.4 | 40.0 | 70.9 | 60 - 140 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFOA | 335-67-1 | 35.8 | 40.0 | 89.4 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFHpS | 375-92-8 | 39.5 | 40.0 | 98.6 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFNA | 375-95-1 | 36.3 | 40.0 | 90.7 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFOSA | 754-91-6 | 35.1 | 40.0 | 87.7 | 65 - 140 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFOS | 1763-23-1 | 38.0 | 40.0 | 95.1 | 65 - 140 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFDA | 335-76-2 | 40.8 | 40.0 | 102 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 8:2 FTS | 39108-34-4 | 40.3 | 40.0 | 101 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFNS | 68259-12-1 | 32.2 | 40.0 | 80.5 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| MeFOSAA | 2355-31-9 | 35.2 | 40.0 | 88.0 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| EtFOSAA | 2991-50-6 | 38.5 | 40.0 | 96.2 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFUnA | 2058-94-8 | 36.7 | 40.0 | 91.9 | 65 - 140 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFDS | 335-77-3 | 30.5 | 40.0 | 76.3 | 50 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFDaA | 307-55-1 | 39.2 | 40.0 | 98.1 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFTTrDA | 72629-94-8 | 39.5 | 40.0 | 98.8 | 60 - 140 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| PFTeDA | 376-06-7 | 40.4 | 40.0 | 101 | 65 - 135 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| Labeled Standards | | Type | | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | | IS | | 101 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C3-PFPeA | | IS | | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C3-PFBS | | IS | | 107 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-4:2 FTS | | IS | | 106 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFHxA | | IS | | 117 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C4-PFHpA | | IS | | 108 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C3-PFHxS | | IS | | 96.2 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-6:2 FTS | | IS | | 101 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFOA | | IS | | 101 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C5-PFNA | | IS | | 107 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |

Sample ID: OPR

PFAS Isotope Dilution Method

Client Data

Name: Hall Environmental Analytical Laboratory
 Project: 2209A41

Matrix: Aqueous

Laboratory Data

Lab Sample: B22J201-BS1

Column: BEH C18

| Labeled Standards | Type | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
|-------------------|------|-------|----------|------------|---------|-----------|-----------|-----------------|----------|
| 13C8-PFOSA | IS | 88.7 | 10 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C8-PFOS | IS | 106 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFDA | IS | 96.8 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-8:2 FTS | IS | 92.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| d3-MeFOSAA | IS | 99.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| d5-EtFOSAA | IS | 81.9 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFUnA | IS | 87.1 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFDoA | IS | 82.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |
| 13C2-PFTeDA | IS | 84.0 | 20 - 150 | | B22J201 | 25-Oct-22 | 0.250 L | 28-Oct-22 01:59 | 1 |

| Sample ID: EB-09-20-22 | | | | | PFAS Isotope Dilution Method | | | | | |
|------------------------|--|-----------------|-----------------|-----------------|------------------------------|-----------|-----------|-----------------|----------|--|
| Client Data | | | | Laboratory Data | | | | | | |
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | 2209182-01 | Column: | BEH C18 | | | |
| Project: | 2209A41 | Date Collected: | 20-Sep-22 12:40 | Date Received: | 22-Sep-22 09:49 | | | | | |
| Location: | 2209A1-002A | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFPeA | 2706-90-3 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFBS | 375-73-5 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFHxA | 307-24-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFPeS | 2706-91-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFHpA | 375-85-9 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFHxS | 355-46-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 6:2 FTS | 27619-97-2 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFOA | 335-67-1 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFHpS | 375-92-8 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFNA | 375-95-1 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFOSA | 754-91-6 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFOS | 1763-23-1 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFDA | 335-76-2 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 8:2 FTS | 39108-34-4 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFNS | 68259-12-1 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFUnA | 2058-94-8 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFDS | 335-77-3 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFDaA | 307-55-1 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| PFTeDA | 376-06-7 | ND | 1.96 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 91.7 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C3-PFPeA | IS | 98.9 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C3-PFBS | IS | 106 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C2-4:2 FTS | IS | 95.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C2-PFHxA | IS | 112 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C4-PFHpA | IS | 105 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C3-PFHxS | IS | 101 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C2-6:2 FTS | IS | 96.6 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C2-PFOA | IS | 86.8 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C5-PFNA | IS | 97.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C8-PFOSA | IS | 71.4 | 10 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |
| 13C8-PFOS | IS | 84.0 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 | |

| Sample ID: EB-09-20-22 | | | | | PFAS Isotope Dilution Method | | | | |
|------------------------|--|------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|
| Client Data | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2209182-01 | Column: | BEH C18 | |
| Project: | 2209A41 | | Date Collected: | 20-Sep-22 12:40 | Date Received: | 22-Sep-22 09:49 | | | |
| Location: | 2209A1-002A | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C2-PFDA | IS | 87.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| 13C2-8:2 FTS | IS | 93.3 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| d3-MeFOSAA | IS | 92.6 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| d5-EtFOSAA | IS | 76.8 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| 13C2-PFUnA | IS | 91.3 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| 13C2-PFDoA | IS | 74.5 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |
| 13C2-PFTeDA | IS | 86.0 | 20 - 150 | | B22J201 | 25-Oct-22 | 0.255 L | 28-Oct-22 02:10 | 1 |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|-------------------|--|--------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2209182-02 | | Column: | BEH C18 | |
| Project: | 2209A41 | | Date Collected: | 20-Sep-22 10:15 | Date Received: | 22-Sep-22 09:49 | | | | |
| Location: | 2209A1-003G | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | 121 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFPeA | 2706-90-3 | 470 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFBS | 375-73-5 | 35.1 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFHxA | 307-24-4 | 352 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFPeS | 2706-91-4 | 42.5 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFHpA | 375-85-9 | 134 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFHxS | 355-46-4 | 255 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 6:2 FTS | 27619-97-2 | 556 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFOA | 335-67-1 | 108 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFHpS | 375-92-8 | 8.81 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFNA | 375-95-1 | 482 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFOSA | 754-91-6 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFOS | 1763-23-1 | 316 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFDA | 335-76-2 | 12.3 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 8:2 FTS | 39108-34-4 | 71.4 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFNS | 68259-12-1 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFUnA | 2058-94-8 | 71.7 | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFDS | 335-77-3 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFDaA | 307-55-1 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| PFTeDA | 376-06-7 | ND | 2.01 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 61.2 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C3-PFPeA | IS | 93.9 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C3-PFBS | IS | 101 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C2-4:2 FTS | IS | 91.6 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C2-PFHxA | IS | 112 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C4-PFHpA | IS | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C3-PFHxS | IS | 93.4 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C2-6:2 FTS | IS | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C2-PFOA | IS | 96.4 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C5-PFNA | IS | 104 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C8-PFOSA | IS | 67.1 | 10 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |
| 13C8-PFOS | IS | 102 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 | |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | |
|--------------------|--|------------|-----------------|------------------------|------------------------------|-----------------|-----------|-----------------|----------|
| Client Data | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2209182-02 | Column: | BEH C18 | |
| Project: | 2209A41 | | Date Collected: | 20-Sep-22 10:15 | Date Received: | 22-Sep-22 09:49 | | | |
| Location: | 2209A1-003G | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C2-PFDA | IS | 100 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| 13C2-8:2 FTS | IS | 83.4 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| d3-MeFOSAA | IS | 85.0 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| d5-EtFOSAA | IS | 80.1 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| 13C2-PFUnA | IS | 84.6 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| 13C2-PFDoA | IS | 73.8 | 25 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |
| 13C2-PFTeDA | IS | 47.5 | 20 - 150 | | B22J201 | 25-Oct-22 | 0.249 L | 28-Oct-22 02:20 | 1 |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

| | |
|---------|--|
| B | This compound was also detected in the method blank |
| Conc. | Concentration |
| CRS | Cleanup Recovery Standard |
| D | Dilution |
| DL | Detection Limit |
| E | The associated compound concentration exceeded the calibration range of the instrument |
| H | Recovery and/or RPD was outside laboratory acceptance limits |
| I | Chemical Interference |
| IS | Internal Standard |
| J | The amount detected is below the Reporting Limit/LOQ |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| M | Estimated Maximum Possible Concentration (CA Region 2 projects only) |
| MDL | Method Detection Limit |
| NA | Not applicable |
| ND | Not Detected |
| OPR | Ongoing Precision and Recovery sample |
| P | The reported concentration may include contribution from chlorinated diphenyl ether(s). |
| Q | The ion transition ratio is outside of the acceptance criteria. |
| RL | Reporting Limit |
| RL | For 537.1, the reported RLs are the MRLs. |
| TEQ | Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations. |
| TEQMax | TEQ calculation that uses the detection limit as the concentration for non-detects |
| TEQMin | TEQ calculation that uses zero as the concentration for non-detects |
| TEQRisk | TEQ calculation that uses ½ the detection limit as the concentration for non-detects |
| U | Not Detected (specific projects only) |
| * | See Cover Letter |

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

| Accrediting Authority | Certificate Number |
|--|---------------------------|
| Alaska Department of Environmental Conservation | 17-013 |
| Arkansas Department of Environmental Quality | 21-023-0 |
| California Department of Health – ELAP | 2892 |
| DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005 | 3091.01 |
| Florida Department of Health | E87777 |
| Hawaii Department of Health | N/A |
| Louisiana Department of Environmental Quality | 01977 |
| Maine Department of Health | 2020018 |
| Massachusetts Department of Environmental Protection | M-CA413 |
| Michigan Department of Environmental Quality | 9932 |
| Minnesota Department of Health | 2211390 |
| New Hampshire Environmental Accreditation Program | 207721 |
| New Jersey Department of Environmental Protection | CA003 |
| New York Department of Health | 11411 |
| Ohio Environmental Protection Agency | 87778 |
| Oregon Laboratory Accreditation Program | 4042-021 |
| Pennsylvania Department of Environmental Protection | 018 |
| Texas Commission on Environmental Quality | T104704189-22-13 |
| Vermont Department of Health | VT-4042 |
| Virginia Department of General Services | 11276 |
| Washington Department of Ecology | C584 |
| Wisconsin Department of Natural Resources | 998036160 |

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

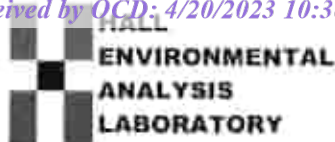
| MATRIX: Air | |
|---|-----------|
| Description of Test | Method |
| Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans | EPA 23 |
| Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS | EPA TO-9A |

| MATRIX: Biological Tissue | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Drinking Water | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613/1613B |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | EPA 537.1 |
| Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry | EPA 533 |
| Perfluorooctanesulfonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry | ISO 25101 2009 |

| MATRIX: Non-Potable Water | |
|---|-----------------------|
| Description of Test | Method |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Dioxin by GC/HRMS | EPA 613 |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |

| MATRIX: Solids | |
|---|-----------------------|
| Description of Test | Method |
| Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613 |
| Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS | EPA 1613B |
| Brominated Diphenyl Ethers by HRGC/HRMS | EPA 1614A |
| Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS | EPA 1668A/C |
| Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS | EPA 1699 |
| Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS | PFAS Isotope Dilution |
| Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS | EPA 8280A/B |
| Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS | EPA 8290/8290A |



CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

Page 2703 of 5177

Hallen Environmental Analysis Laboratory
 4901 Havens NE
 Albuquerque, NM 87109
 TEL: 505-345-3978
 FAX: 505-345-4100
 Website: www.hallenenvironmental.com

2209182

1.4°C

| SUB CONTRACTOR: Vista Analytical Labor | | COMPANY: Vista Analytical Laboratory | | PHONE: (916) 673-1520 | | FAX: | |
|---|--------------|--------------------------------------|-------------|-----------------------|-----------------------|---|--|
| ADDRESS: 1104 Windfield Way | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: El Dorado Hills, CA 95762 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | ANALYTICAL COMMENTS | |
| 1 | 2209A41-002A | EB-09-20-22 | 250HOPE | Groundw | 9/20/2022 12:40:00 PM | 2-24 Compound PFAS Testing Unchlorinated Sample J and MDL | |
| 2 | 2209A41-003G | OW-63 | 250HOPE | Groundw | 9/20/2022 10:15:00 AM | 2-24 Compound PFAS Testing Unchlorinated Sample J and MDL | |

SPECIAL INSTRUCTIONS/COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|-----------------|---------------|---------------------------------|----------------|-------------|---|
| Relinquished By: <i>Cue</i> | Date: 9/21/2022 | Time: 9:07 AM | Received By: <i>Byron Clark</i> | Date: 09/22/22 | Time: 09:49 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY
Temp of sample: _____ °C Attach to Cooler: _____
Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |



Sample Log-In Checklist

Page # 1 of 1Vista Work Order #: 2209182 TAT: Std

| | | | |
|-----------------------------------|--|-------------------------|---|
| Samples Arrival: | Date/Time
<u>09:49</u>
<u>09/22/22</u> | Initials:
<u>BAC</u> | Location: <u>WR-2</u>
Shelf/Rack: <u>N/A</u> |
| Delivered By: | <u>FedEx</u> | UPS | On Trac |
| | GLS | DHL | Hand Delivered |
| | Other | | |
| Preservation: | Ice | <u>Blue Ice</u> | Techni Ice |
| | | Dry Ice | None |
| Temp °C: <u>1.6</u> (uncorrected) | Probe used: Y / <u>N</u> | | Thermometer ID: <u>IR-4</u> |
| Temp °C: <u>1.4</u> (corrected) | | | |

| | YES | NO | NA |
|---|-------------------------------------|-------------------------------------|--|
| Shipping Container(s) Intact? | ☒ | | |
| Shipping Custody Seals Intact? | ☒ | | |
| Airbill | Trk # <u>777999572702</u> | ☒ | |
| Shipping Documentation Present? | ☒ | | |
| Shipping Container | Vista | <u>Client</u> | Retain |
| | | <u>Return</u> | Dispose |
| Chain of Custody / Sample Documentation Present? | ☒ | | |
| Chain of Custody / Sample Documentation Complete? | ☒ | | |
| Holding Time Acceptable? | ☒ | | |
| Logged In: | Date/Time
<u>09/22/22 13:40</u> | Initials:
<u>KA</u> | Location: <u>R-13, WR-2</u>
Shelf/Rack: <u>A-3, H-4</u> |
| COC Anomaly/Sample Acceptance Form completed? | | ☒ | ☒ |

Comments:

CoC/Label Reconciliation Report WO# 2209182

| Lab Number | CoC Sample ID | | Sample Alias | Sample Date/Time | | Container | Base Matrix | Sample Comments |
|------------|---------------|---|--------------|------------------|-------------------------------------|---------------------|-------------|-----------------|
| 2209182-01 | A EB-09-20-22 | ☒ | 2209A1-002A | 20-Sep-22 12:40 | ☒ | HDPE Bottle, 250 mL | Aqueous | |
| 2209182-01 | B EB-09-20-22 | ☒ | 2209A1-002A | 20-Sep-22 12:40 | ☒ | HDPE Bottle, 250 mL | Aqueous | |
| 2209182-02 | A OW-63 | ☒ <i>01</i> | 2209A1-003G | 20-Sep-22 10:15 | ☒ | HDPE Bottle, 250 mL | Aqueous | |
| 2209182-02 | B OW-63 | ☒ <i>01</i> | 2209A1-003G | 20-Sep-22 10:15 | ☒ | HDPE Bottle, 250 mL | Aqueous | |

Checkmarks indicate that information on the CoC reconciled with the sample label.

Any discrepancies are noted in the following columns.

| | Yes | No | NA |
|---|-------------------------------------|--------------------------|-------------------------------------|
| Sample Container Intact? | ☒ | ☐ | ☐ |
| Sample Custody Seals Intact? | ☐ | ☐ | ☒ |
| Adequate Sample Volume? | ☒ | ☐ | ☐ |
| Container Type Appropriate for Analysis(es) | ☒ | ☐ | ☐ |

Comments: *BESS Trizma label.*

Sample contains light rusty tint.

Preservation Documented: Na₂S₂O₃ *Trizma* NH₄CH₃CO₂ None Other

Verified by/Date: *Kg 09/22/22*

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70359 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70359 | RunNo: 91277 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266355 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-70359 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70359 | RunNo: 91277 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266356 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 106 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.0 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.5 | 50 | 150 | | | J |
| Chromium | 0.0055 | 0.0060 | 0.006000 | 0 | 91.6 | 50 | 150 | | | J |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 99.8 | 50 | 150 | | | J |
| Vanadium | 0.0093 | 0.050 | 0.01000 | 0 | 92.6 | 50 | 150 | | | J |
| Zinc | 0.0097 | 0.010 | 0.01000 | 0 | 97.0 | 50 | 150 | | | J |

| Sample ID: LCS-70359 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70359 | RunNo: 91277 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266357 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 97.0 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.2 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 97.4 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 93.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70359 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70359 | RunNo: 91312 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268088 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70359 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70359 | RunNo: 91312 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268089 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.0044 | 0.010 | 0.005000 | 0 | 87.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70359 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70359 | RunNo: 91312 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268090 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: B91392 | | RunNo: 91392 | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | | SeqNo: 3271802 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B91392 | | RunNo: 91392 | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | | SeqNo: 3271803 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Cadmium | 0.0026 | 0.0020 | 0.002000 | 0 | 128 | 50 | 150 | | | |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0058 | 0.010 | 0.005000 | 0 | 115 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 111 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 101 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B91392 | | RunNo: 91392 | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | | SeqNo: 3271810 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.4 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |

Qualifiers:

| | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Above Quantitation Range/Estimated Value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of standard limits. If undiluted results may be estimated. | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A91423 | | RunNo: 91423 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3273040 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

| | | | | | | | | | | |
|----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LL LCS-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A91423 | | RunNo: 91423 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3273041 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 107 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A91423 | | RunNo: 91423 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3273042 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.1 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209A41-012EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: DUP 9-20-22 | Batch ID: A91423 | | RunNo: 91423 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3273073 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.095 | 0.0050 | 0.1000 | 0.001612 | 92.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209A41-012EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: DUP 9-20-22 | Batch ID: A91423 | | RunNo: 91423 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3273075 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.096 | 0.0050 | 0.1000 | 0.001612 | 94.7 | 70 | 130 | 1.81 | 20 | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A91594 | | RunNo: 91594 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3281370 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLLCS-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A91594 | | RunNo: 91594 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3281371 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A91594 | | RunNo: 91594 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3281372 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 99.1 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209A41-001EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB-09-20-22 | Batch ID: A91594 | | RunNo: 91594 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3281374 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 93.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2209A41-001EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: EB-09-20-22 | Batch ID: A91594 | | RunNo: 91594 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3281375 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 93.8 | 70 | 130 | 0.161 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70359 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70359 | | RunNo: 91299 | | | | | | |
| Prep Date: 9/22/2022 | | Analysis Date: 9/26/2022 | | SeqNo: 3267421 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70359 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 70359 | | | RunNo: 91299 | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | | | SeqNo: 3267422 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 118 | 50 | 150 | | | |
| Arsenic | 0.00093 | 0.0010 | 0.001000 | 0 | 92.8 | 50 | 150 | | | J |
| Lead | 0.00055 | 0.00050 | 0.0005000 | 0 | 109 | 50 | 150 | | | |
| Selenium | 0.00098 | 0.0010 | 0.001000 | 0 | 97.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-70359 | | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 70359 | | | RunNo: 91299 | | | | | |
| Prep Date: 9/22/2022 | | Analysis Date: 9/26/2022 | | | SeqNo: 3267423 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: B91237 | | RunNo: 91237 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264881 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B91237 | | RunNo: 91237 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264882 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00097 | 0.0010 | 0.001000 | 0 | 96.7 | 50 | 150 | | | J |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00055 | 0.00050 | 0.0005000 | 0 | 110 | 50 | 150 | | | |
| Selenium | 0.00098 | 0.0010 | 0.001000 | 0 | 97.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B91237 | | RunNo: 91237 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264883 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209A41-001EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-09-20-22 | Batch ID: B91237 | | RunNo: 91237 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264908 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.5 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.5 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209A41-001EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-09-20-22 | Batch ID: B91237 | | RunNo: 91237 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264909 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Above Quantitation Range/Estimated Value |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Limit |
| S % Recovery outside of standard limits. If undiluted results may be estimated. | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|-------|----------|------|
| Sample ID: 2209A41-001EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-09-20-22 | | Batch ID: B91237 | | RunNo: 91237 | | | | | | |
| Prep Date: | | Analysis Date: 9/22/2022 | | SeqNo: 3264909 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 70 | 130 | 0.535 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | 0.455 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.9 | 70 | 130 | 0.426 | 20 | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | 7.47 | 20 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70390 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 70390 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267752 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-70390 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 70390 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267753 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00013 0.00020 0.0001500 | 0 86.7 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-70390 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 70390 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267754 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 | 0 101 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2209A41-010DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-67 | Batch ID: 70390 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267816 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0047 0.0010 0.005000 | 0 94.2 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2209A41-010DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-67 | Batch ID: 70390 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267817 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0042 0.0010 0.005000 | 0 83.9 75 125 11.5 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70321 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70321 | | RunNo: 91221 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265488 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70321 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70321 | | RunNo: 91221 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265489 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70321 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70321 | | RunNo: 91221 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265491 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.097 | 0.010 | 0.1000 | 0 | 96.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70321 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70321 | | RunNo: 91221 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265492 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 | 0.1000 | 0 | 94.2 | 70 | 130 | 2.71 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209a41-012bms | SampType: MS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: DUP 9-20-22 | Batch ID: 70321 | | RunNo: 91221 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265625 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.065 | 0.0094 | 0.09383 | 0 | 69.5 | 65 | 135 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70323 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269062 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.021 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.042 | | 0.03750 | | 112 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70323 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269063 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 64.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70323 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269064 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 57.3 | 31.7 | 75.4 | 11.4 | 20 | |
| Surr: DNOP | 0.018 | | 0.01875 | | 93.7 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70376 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70376 | | RunNo: 91332 | | | | | | | |
| Prep Date: 9/23/2022 | Analysis Date: 9/27/2022 | | SeqNo: 3270736 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.025 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.037 | | 0.03750 | | 99.2 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70376 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70376 | | RunNo: 91332 | | | | | | | |
| Prep Date: 9/23/2022 | Analysis Date: 9/27/2022 | | SeqNo: 3270740 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 77.7 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.019 | | 0.01875 | | 100 | 42.2 | 138 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|-------|----------|------|
| Sample ID: LCSD-70376 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 70376 | | | RunNo: 91332 | | | | | | |
| Prep Date: 9/23/2022 | Analysis Date: 9/27/2022 | | | SeqNo: 3270743 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 | 0.1875 | 0 | 76.9 | 31.7 | 75.4 | 0.242 | 20 | S |
| Surr: DNOP | 0.018 | | 0.01875 | | 95.9 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: LCSW | Batch ID: R91291 | | | RunNo: 91291 | | | | | | |
| Prep Date: | Analysis Date: 9/23/2022 | | | SeqNo: 3266691 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0 | 97.2 | 80 | 120 | | | |
| Surr: BFB | 43 | | 20.00 | | 217 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: PBW | Batch ID: R91291 | | | RunNo: 91291 | | | | | | |
| Prep Date: | Analysis Date: 9/23/2022 | | | SeqNo: 3266692 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209a41-003a ms | SampType: MS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: OW-63 | Batch ID: R91291 | | | RunNo: 91291 | | | | | | |
| Prep Date: | Analysis Date: 9/23/2022 | | | SeqNo: 3266703 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 52 | 2.5 | 25.00 | 26.30 | 104 | 70 | 130 | | | |
| Surr: BFB | 2300 | | 1000 | | 230 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-----|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209A41-003A MSD | SampType: MSD | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: OW-63 | Batch ID: R91291 | | | RunNo: 91291 | | | | | | |
| Prep Date: | Analysis Date: 9/23/2022 | | | SeqNo: 3266704 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 49 | 2.5 | 25.00 | 26.30 | 91.1 | 70 | 130 | 6.47 | 20 | |
| Surr: BFB | 2300 | | 1000 | | 226 | 70 | 130 | 0 | 0 | S |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: LCSW | Batch ID: A91300 | | | RunNo: 91300 | | | | | | |
| Prep Date: | Analysis Date: 9/26/2022 | | | SeqNo: 3268135 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 96.6 | 80 | 120 | | | |
| Surr: BFB | 43 | | 20.00 | | 214 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: PBW | Batch ID: A91300 | | | RunNo: 91300 | | | | | | |
| Prep Date: | Analysis Date: 9/26/2022 | | | SeqNo: 3268136 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 96.6 | 80 | 120 | | | |
| Surr: BFB | 43 | | 20.00 | | 214 | 70 | 130 | | | S |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A91300 | | RunNo: 91300 | | | | | | | |
| Prep Date: | Analysis Date: 9/26/2022 | | SeqNo: 3268136 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 107 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91223 | | RunNo: 91223 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264499 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.6 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 95.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.3 | | 10.00 | | 92.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.7 | | 10.00 | | 87.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91223 | | RunNo: 91223 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264500 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91223 | | RunNo: 91223 | | | | | | | |
| Prep Date: | Analysis Date: 9/22/2022 | | SeqNo: 3264500 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.9 | | 10.00 | | 89.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.9 | | 10.00 | | 89.3 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70340 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70340 | RunNo: 91381 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/28/2022 | SeqNo: 3271745 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 85 | | 200.0 | | 42.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 67 | | 200.0 | | 33.3 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 93 | | 200.0 | | 46.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 50.7 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.1 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 68 | | 100.0 | | 68.0 | 34.4 | 134 | | | |

| Sample ID: LCS-70340 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70340 | RunNo: 91381 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/28/2022 | SeqNo: 3271746 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70340 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70340 | | RunNo: 91381 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/28/2022 | | SeqNo: 3271746 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 60 | 10 | 100.0 | 0 | 60.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 52 | 5.0 | 100.0 | 0 | 52.5 | 15 | 89.8 | | | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.3 | 17 | 61.1 | | | |
| Pyrene | 71 | 10 | 100.0 | 0 | 71.3 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 90 | | 200.0 | | 44.9 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 56.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 56 | | 100.0 | | 56.5 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.3 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 72.5 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70340 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70340 | | RunNo: 91381 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/28/2022 | | SeqNo: 3271747 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 56 | 10 | 100.0 | 0 | 55.6 | 21.3 | 104 | 7.66 | 45.3 | |
| 1,4-Dichlorobenzene | 51 | 5.0 | 100.0 | 0 | 51.1 | 15 | 89.8 | 2.61 | 39.6 | |
| Phenol | 72 | 20 | 200.0 | 0 | 35.9 | 17 | 61.1 | 6.42 | 42.5 | |
| Pyrene | 65 | 10 | 100.0 | 0 | 65.3 | 61 | 123 | 8.68 | 11.8 | |
| Surr: 2-Fluorophenol | 85 | | 200.0 | | 42.7 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 66 | | 200.0 | | 33.0 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 53.8 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 59.0 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.5 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 72 | | 100.0 | | 72.3 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70340 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70340 | | RunNo: 91314 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3268174 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 49.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 63 | | 200.0 | | 31.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 50 | | 100.0 | | 49.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 64 | | 100.0 | | 64.3 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70340 LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70340 | | RunNo: 91314 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3268175 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.90 | 0.10 | 2.000 | 0 | 45.0 | 15 | 60.5 | | | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 15 | 92 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 15 | 96 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 21 | 103 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 32.8 | 119 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 32 | 132 | | | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 104 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 68.1 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209A41

04-Nov-22

Client: Marathon

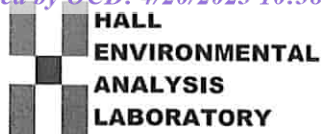
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70340 LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70340 | | RunNo: 91314 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3268175 | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 78 | | 200.0 | | 38.9 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 64.2 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 64 | | 100.0 | | 63.9 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70340 LF | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70340 | | RunNo: 91314 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3268176 | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.90 | 0.10 | 2.000 | 0 | 45.0 | 15 | 60.5 | 0 | 29.7 | |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.3 | 0 | 31.7 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 79.6 | 0 | 31.4 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 15 | 78.6 | 0 | 30.5 | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 15 | 92 | 1.29 | 30.5 | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 15 | 96 | 1.24 | 25.1 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21 | 103 | 1.18 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 21.1 | 106 | 0 | 14.4 | |
| Fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 32.8 | 119 | 2.27 | 14.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 34.1 | 110 | 2.33 | 19.2 | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 32 | 132 | 2.20 | 29.3 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 31.3 | 112 | 2.33 | 19 | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 34.1 | 119 | 2.17 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.1 | 0.30 | 2.000 | 0 | 104 | 24.7 | 152 | 0 | 21.3 | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 69.8 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 80 | | 200.0 | | 39.8 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.2 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 65 | | 100.0 | | 65.0 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209A41**

RcptNo: 1

Received By: **Cheyenne Cason**

9/21/2022 7:30:00 AM

*Chad*Completed By: **Cheyenne Cason**

9/21/2022 8:48:25 AM

*Chad*Reviewed By: *JA 9-21-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐ *JA 9/21/22*
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: *20/10*
(2 or 12 unless noted)

Adjusted? *YES*

Checked by: *JA 9/21/22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

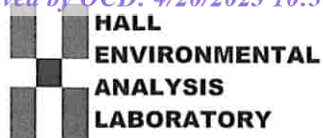
Regarding: _____

Client Instructions: _____

16. Additional remarks: *0.5ml of HNO3 was added to samples 012D, 009D, 006D, 004D, for pH < 2. JA 9/21/22.*

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 5.4 | Good | Yes | | | |
| 2 | 3.1 | Good | Yes | | | |
| 3 | 3.3 | Good | Yes | | | |
| 4 | 4.0 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209A41**

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 4.3 | Good | Yes | | | |
| 6 | 3.3 | Good | Yes | | | |

Chain-of-Custody Record

Marathon Gallup Refinery

Address:

92 Giant Crossing Road

Jamestown, NM, 87347

Phone:

808-640-1823

Fax:

808-640-1823

Package:

Level 4 (Full Validation)

Az Compliance

Other

D (Type)

Turn-Around Time:

X Standard Rush

Project Name:

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice:

Yes No

of Coolers:

6

Cooler Temp (including CF):

See Checklist

Time

Matrix

Sample Name

9/20 8:00

EB-9-20-22

13

Preservative Type

HEAL No. 2209411

9/20 12:40

EB-9-20-2022

2

Preservative Type

HEAL No. 2209411

9/20 10:15

OW-67

15

Preservative Type

HEAL No. 2209411

9/20 10:45

OW-58A

13

Preservative Type

HEAL No. 2209411

9/20 11:05

OW-58

13

Preservative Type

HEAL No. 2209411

9/20 11:30

OW-64

13

Preservative Type

HEAL No. 2209411

9/20 11:40

STP-1-New

13

Preservative Type

HEAL No. 2209411

9/20 11:55

OW-60

13

Preservative Type

HEAL No. 2209411

9/20 12:10

OW-68

13

Preservative Type

HEAL No. 2209411

9/20 12:20

OW-67

13

Preservative Type

HEAL No. 2209411

9/20 12:20

FB-9-20-22

3

Preservative Type

HEAL No. 2209411

9/20 -

DUP-9-20-22

13

Preservative Type

HEAL No. 2209411

Time:

Relinquished by: Hilary Trujillo

Received by:

Date Time

Time:

Relinquished by:

Received by:

Date Time

Trip Blank - 013

Cmc Carver 9/21/22 0730

Via:

Date Time

Trip Blank - 013

Cmc Carver 9/21/22 0730

Via:

Date Time

Trip Blank - 013

Cmc Carver 9/21/22 0730

Via:

Date Time

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Cmc Carver 9/21/22 0730



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 24, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209E92

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 13 sample(s) on 9/28/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209E92
Date: 10/24/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 SIMS:

1,4-Dioxane is "E" flagged for sample MKTF-32 because the result was slightly above the calibration range.

Analytical Notes Regarding EPA Method 8015DRO:

The LCS had slightly elevated recovery. The LCSD had acceptable recoveries.

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 9:38:00 PM | A91419 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 9:38:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:45:48 PM | B91469 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:45:48 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 12:26:26 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.039 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 5:52:10 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 5:52:10 PM | 70480 |
| Surr: DNOP | 93.4 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 5:52:10 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: 2-Fluorophenol | 39.2 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: Phenol-d5 | 29.2 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 55.5 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: Nitrobenzene-d5 | 52.1 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 49.2 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 70.0 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 2:48:04 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 12:48:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 45.9 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 39.4 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 12:48:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 55.0 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 12:48:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 10:56:01 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/29/2022 1:20:37 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 10:56:01 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 1:49:46 PM | 70455 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 1:49:46 PM | 70455 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 1:49:46 PM | 70455 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 1:49:46 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:17:21 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:00:00 AM

Lab ID: 2209E92-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| Zinc | 0.0077 | 0.0032 | 0.010 | J | mg/L | 1 | 10/4/2022 2:03:40 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 1:43:24 PM | B91411 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 1:43:24 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 1:43:24 PM | B91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 1:43:24 PM | B91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:19:29 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:35:00 AM

Lab ID: 2209E92-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 9:57:00 PM | A91419 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 9:57:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 2.7 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:12:49 PM | B91469 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:12:49 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-002B

Client Sample ID: OW-1

Collection Date: 9/27/2022 8:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 10/4/2022 12:41:30 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:35:00 AM

Lab ID: 2209E92-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.031 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 6:16:28 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 6:16:28 PM | 70480 |
| Surr: DNOP | 94.9 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 6:16:28 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | 9.0 | 8.4 | 10 | J | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Di-n-butyl phthalate | 18 | 7.7 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: 2-Fluorophenol | 26.9 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: Phenol-d5 | 20.5 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 44.7 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: Nitrobenzene-d5 | 35.6 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 36.2 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 48.5 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 3:29:28 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Pyrene | 0.32 | 0.32 | 1.0 | J | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 1:32:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:35:00 AM

Lab ID: 2209E92-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 30.3 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 28.3 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 1:32:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 33.8 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 1:32:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:35:00 AM

Lab ID: 2209E92-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.041 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 10:57:37 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Vanadium | 0.041 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 1:25:20 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 10:57:37 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 1:52:12 PM | 70455 |
| Arsenic | 0.00065 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/30/2022 1:52:12 PM | 70455 |
| Lead | 0.00014 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/30/2022 1:52:12 PM | 70455 |
| Selenium | 0.0020 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 1:52:12 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:21:39 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 8:35:00 AM

Lab ID: 2209E92-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.041 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Vanadium | 0.036 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| Zinc | 0.045 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:14:35 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 1:46:05 PM | B91411 |
| Arsenic | 0.00060 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 1:46:05 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 1:46:05 PM | B91411 |
| Selenium | 0.0025 | 0.00034 | 0.0010 | | mg/L | 1 | 10/3/2022 2:08:20 PM | B91488 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:23:49 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:20:00 AM

Lab ID: 2209E92-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 10:17:00 PM | A91419 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 10:17:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:39:50 PM | B91469 |
| Surr: Toluene-d8 | 97.9 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:39:50 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-003B

Client Sample ID: BW-4B

Collection Date: 9/27/2022 9:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 1:11:41 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:20:00 AM

Lab ID: 2209E92-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.041 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 6:40:46 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 6:40:46 PM | 70480 |
| Surr: DNOP | 99.2 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 6:40:46 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: 2-Fluorophenol | 44.4 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: Phenol-d5 | 33.0 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 71.8 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: Nitrobenzene-d5 | 56.5 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 54.1 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 79.2 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 4:10:50 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 2:17:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:20:00 AM

Lab ID: 2209E92-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 50.2 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 43.9 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 2:17:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 55.2 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 2:17:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:20:00 AM

Lab ID: 2209E92-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.10 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Chromium | 0.021 | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Nickel | 0.0069 | 0.0053 | 0.010 | J | mg/L | 1 | 10/3/2022 10:59:11 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Vanadium | 0.11 | 0.0035 | 0.050 | | mg/L | 1 | 9/29/2022 1:29:53 PM | 70455 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 10:59:11 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 1:54:39 PM | 70455 |
| Arsenic | 0.0099 | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 1:54:39 PM | 70455 |
| Lead | 0.0023 | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 1:54:39 PM | 70455 |
| Selenium | 0.00046 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/30/2022 1:54:39 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:25:59 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:20:00 AM

Lab ID: 2209E92-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.041 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Nickel | 0.016 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Vanadium | 0.0094 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:18:49 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 1:48:46 PM | B91411 |
| Arsenic | 0.0062 | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 1:48:46 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 1:48:46 PM | B91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 1:48:46 PM | B91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:28:07 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.023 | 0.0090 | 0.050 | J | mg/L | 1 | 9/29/2022 10:37:00 PM | A91419 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 10:37:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 22 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,2-Dichloroethane (EDC) | 0.59 | 0.25 | 1.0 | J | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,1-Dichloroethane | 0.76 | 0.27 | 1.0 | J | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Surr: Dibromofluoromethane | 118 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:06:51 PM | B91469 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:06:51 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 1:26:44 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.064 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 7:05:08 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 7:05:08 PM | 70480 |
| Surr: DNOP | 73.9 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 7:05:08 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: 2-Fluorophenol | 49.4 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: Phenol-d5 | 35.6 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 69.6 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: Nitrobenzene-d5 | 61.5 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 55.7 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 79.4 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 4:52:40 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.5 | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 3:02:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.1 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 53.5 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 3:02:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 67.6 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 3:02:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.62 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Chromium | 0.030 | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Cobalt | 0.0062 | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Nickel | 0.013 | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:00:28 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:00:28 AM | 70455 |
| Vanadium | 0.036 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 1:38:56 PM | 70455 |
| Zinc | 0.037 | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:00:28 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 1:57:06 PM | 70455 |
| Arsenic | 0.0018 | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 1:57:06 PM | 70455 |
| Lead | 0.0077 | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 1:57:06 PM | 70455 |
| Selenium | 0.0022 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 1:57:06 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00030 | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:30:15 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 9:45:00 AM

Lab ID: 2209E92-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.093 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Silver | 0.0022 | 0.0013 | 0.0050 | J | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| Zinc | 0.036 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:22:50 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 1:56:53 PM | B91411 |
| Arsenic | 0.00031 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 1:56:53 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 1:56:53 PM | B91411 |
| Selenium | 0.00036 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/29/2022 1:56:53 PM | B91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:36:38 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:00:00 AM

Lab ID: 2209E92-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.013 | 0.0090 | 0.050 | J | mg/L | 1 | 9/29/2022 10:56:00 PM | A91419 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 10:56:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 13 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,2-Dichloroethane (EDC) | 0.37 | 0.25 | 1.0 | J | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Acetone | 4.3 | 2.5 | 10 | J | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,1-Dichloroethane | 0.42 | 0.27 | 1.0 | J | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 113 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:33:53 PM | B91469 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 6:33:53 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:00:00 AM

Lab ID: 2209E92-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 10/4/2022 1:41:45 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:00:00 AM

Lab ID: 2209E92-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.060 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 7:29:21 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 7:29:21 PM | 70480 |
| Surr: DNOP | 95.7 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 7:29:21 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: 2-Fluorophenol | 65.4 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: Phenol-d5 | 46.7 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 83.3 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: Nitrobenzene-d5 | 72.9 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 67.1 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 93.1 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 5:34:18 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.96 | 0.11 | 1.0 | J | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 3:47:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** BW-5B**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/27/2022 10:00:00 AM**Lab ID:** 2209E92-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.9 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 56.5 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 3:47:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 67.0 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 3:47:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:00:00 AM

Lab ID: 2209E92-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.29 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:01:46 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:01:46 AM | 70455 |
| Vanadium | 0.013 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 1:43:08 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:01:46 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 1:59:32 PM | 70455 |
| Arsenic | 0.00094 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/30/2022 1:59:32 PM | 70455 |
| Lead | 0.00021 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/30/2022 1:59:32 PM | 70455 |
| Selenium | 0.00057 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/30/2022 1:59:32 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:38:46 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:00:00 AM

Lab ID: 2209E92-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.29 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Vanadium | 0.0070 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| Zinc | 0.048 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:27:14 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 1:59:34 PM | B91411 |
| Arsenic | 0.00085 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 1:59:34 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 1:59:34 PM | B91411 |
| Selenium | 0.00081 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/29/2022 1:59:34 PM | B91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:40:54 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:20:00 AM

Lab ID: 2209E92-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 11:16:00 PM | A91419 |
| Surr: BFB | 108 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 11:16:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:00:49 PM | B91469 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:00:49 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-006B

Client Sample ID: MKTF-44

Collection Date: 9/27/2022 10:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 1:56:52 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:20:00 AM

Lab ID: 2209E92-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.048 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 7:53:38 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 7:53:38 PM | 70480 |
| Surr: DNOP | 91.5 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 7:53:38 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: 2-Fluorophenol | 47.2 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: Phenol-d5 | 36.2 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 61.7 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: Nitrobenzene-d5 | 60.3 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 55.6 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 76.0 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 6:16:25 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 4:31:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-44**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/27/2022 10:20:00 AM**Lab ID:** 2209E92-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 67.6 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 55.1 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 4:31:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 71.7 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 4:31:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:20:00 AM

Lab ID: 2209E92-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.33 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Chromium | 0.025 | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:03:16 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:03:16 AM | 70455 |
| Vanadium | 0.24 | 0.0035 | 0.050 | | mg/L | 1 | 9/29/2022 1:47:39 PM | 70455 |
| Zinc | 0.068 | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:03:16 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:06:54 PM | 70455 |
| Arsenic | 0.019 | 0.00013 | 0.0010 | * | mg/L | 1 | 9/30/2022 2:06:54 PM | 70455 |
| Lead | 0.024 | 0.000061 | 0.00050 | * | mg/L | 1 | 9/30/2022 2:06:54 PM | 70455 |
| Selenium | 0.014 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:06:54 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:43:01 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:20:00 AM

Lab ID: 2209E92-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.033 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Vanadium | 0.13 | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:31:32 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00070 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:02:16 PM | B91411 |
| Arsenic | 0.012 | 0.00012 | 0.0010 | * | mg/L | 1 | 9/29/2022 2:02:16 PM | B91411 |
| Lead | 0.00013 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/29/2022 2:02:16 PM | B91411 |
| Selenium | 0.012 | 0.00034 | 0.0010 | | mg/L | 1 | 10/3/2022 2:16:24 PM | B91488 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:45:10 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:40:00 AM

Lab ID: 2209E92-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 11:36:00 PM | A91419 |
| Surr: BFB | 109 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 11:36:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 99.5 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:28:02 PM | B91469 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:28:02 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-007B

Client Sample ID: MKTF-43

Collection Date: 9/27/2022 10:40:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 2:11:56 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:40:00 AM

Lab ID: 2209E92-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.10 | 0.016 | 0.064 | | mg/L | 1 | 9/29/2022 8:17:46 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 8:17:46 PM | 70480 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 8:17:46 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: 2-Fluorophenol | 1.82 | 0 | 15-84.5 | S | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: Phenol-d5 | 5.85 | 0 | 15-67 | S | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 2.98 | 0 | 15-108 | S | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: Nitrobenzene-d5 | 63.2 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 62.9 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 82.6 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 6:58:26 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 5:15:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:40:00 AM

Lab ID: 2209E92-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.1 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 56.1 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 5:15:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 67.0 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 5:15:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:40:00 AM

Lab ID: 2209E92-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.085 | 0.0079 | 0.015 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Cobalt | 0.094 | 0.018 | 0.030 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Nickel | ND | 0.027 | 0.050 | | mg/L | 5 | 10/3/2022 11:04:24 AM | 70455 |
| Silver | 0.031 | 0.0092 | 0.025 | | mg/L | 5 | 10/3/2022 11:04:24 AM | 70455 |
| Vanadium | ND | 0.018 | 0.25 | | mg/L | 5 | 9/29/2022 1:58:36 PM | 70455 |
| Zinc | ND | 0.019 | 0.050 | | mg/L | 5 | 10/3/2022 11:04:24 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:09:20 PM | 70455 |
| Arsenic | 0.0030 | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 2:09:20 PM | 70455 |
| Lead | 0.0020 | 0.00097 | 0.0025 | J | mg/L | 5 | 10/5/2022 3:12:27 PM | 70455 |
| Selenium | 0.0018 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:09:20 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:47:18 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 10:40:00 AM

Lab ID: 2209E92-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.055 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Nickel | 0.027 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Silver | 0.039 | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Vanadium | 0.0081 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:49:16 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0040 | 0.0022 | 0.0050 | J | mg/L | 5 | 9/29/2022 2:47:59 PM | A91411 |
| Arsenic | 0.0026 | 0.00061 | 0.0050 | J | mg/L | 5 | 9/29/2022 2:47:59 PM | A91411 |
| Lead | 0.00047 | 0.00028 | 0.0025 | J | mg/L | 5 | 9/29/2022 2:47:59 PM | A91411 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 10/4/2022 11:40:32 AM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:49:27 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/29/2022 11:55:00 PM | A91419 |
| Surr: BFB | 111 | 0 | 70-130 | | %Rec | 1 | 9/29/2022 11:55:00 PM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 3.9 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,2-Dichloroethane (EDC) | 0.37 | 0.25 | 1.0 | J | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,1-Dichloroethane | 0.55 | 0.27 | 1.0 | J | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,1-Dichloroethene | 0.43 | 0.20 | 1.0 | J | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:55:00 PM | B91469 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 7:55:00 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 10/4/2022 2:26:55 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.068 | 0.016 | 0.064 | | mg/L | 1 | 9/29/2022 8:42:04 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 8:42:04 PM | 70480 |
| Surr: DNOP | 99.4 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 8:42:04 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: 2-Fluorophenol | 36.3 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: Phenol-d5 | 27.2 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 53.8 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: Nitrobenzene-d5 | 45.8 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 42.6 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 71.0 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 7:40:27 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.0 | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 6:01:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 42.9 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 34.7 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 6:01:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 54.4 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 6:01:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.048 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Cobalt | 0.0042 | 0.0035 | 0.0060 | J | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:05:54 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:05:54 AM | 70455 |
| Vanadium | 0.0072 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 2:01:45 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:05:54 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:11:47 PM | 70455 |
| Arsenic | 0.00051 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/30/2022 2:11:47 PM | 70455 |
| Lead | 0.000088 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/30/2022 2:11:47 PM | 70455 |
| Selenium | 0.011 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:11:47 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:51:36 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:00:00 AM

Lab ID: 2209E92-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.049 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Silver | 0.0023 | 0.0013 | 0.0050 | J | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Vanadium | 0.0055 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| Zinc | 0.066 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:53:58 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:07:38 PM | B91411 |
| Arsenic | 0.00058 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:07:38 PM | B91411 |
| Lead | 0.00010 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/29/2022 2:07:38 PM | B91411 |
| Selenium | 0.0097 | 0.0017 | 0.0050 | | mg/L | 5 | 10/4/2022 11:43:14 AM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:53:46 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:15:00 AM

Lab ID: 2209E92-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.74 | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 12:15:00 AM | A91419 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 12:15:00 AM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.35 | 0.23 | 1.0 | J | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 890 | 3.9 | 10 | | µg/L | 10 | 10/3/2022 3:08:18 PM | A91498 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 1,2-Dichloroethane (EDC) | 11 | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| cis-1,2-DCE | 2.1 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 1,1-Dichloroethane | 12 | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 1,1-Dichloroethene | 18 | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| sec-Butylbenzene | 0.41 | 0.14 | 1.0 | J | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Trichloroethene (TCE) | 0.28 | 0.20 | 1.0 | J | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 97.3 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:21:59 PM | B91469 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:21:59 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-009B

Client Sample ID: MKTF-32

Collection Date: 9/27/2022 11:15:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 2:41:55 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:15:00 AM

Lab ID: 2209E92-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.21 | 0.016 | 0.064 | | mg/L | 1 | 9/29/2022 9:06:16 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 9:06:16 PM | 70480 |
| Surr: DNOP | 96.4 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 9:06:16 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: 2-Fluorophenol | 36.5 | 0 | 15-84.5 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: Phenol-d5 | 28.1 | 0 | 15-67 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 60.9 | 0 | 15-108 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: Nitrobenzene-d5 | 46.0 | 0 | 16.8-112 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 46.4 | 0 | 15-101 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 72.5 | 0 | 34.4-134 | | %Rec | 1 | 10/11/2022 8:22:21 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 27 | 0.11 | 1.0 | E | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 6:48:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:15:00 AM

Lab ID: 2209E92-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 39.9 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 31.9 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 6:48:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 49.5 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 6:48:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:15:00 AM

Lab ID: 2209E92-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.090 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:07:27 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:07:27 AM | 70455 |
| Vanadium | 0.012 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 2:06:24 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:07:27 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:14:14 PM | 70455 |
| Arsenic | 0.0031 | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 2:14:14 PM | 70455 |
| Lead | 0.0020 | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 2:14:14 PM | 70455 |
| Selenium | 0.00076 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/30/2022 2:14:14 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 11:55:57 AM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:15:00 AM

Lab ID: 2209E92-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.047 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Nickel | 0.0033 | 0.0033 | 0.010 | J | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Vanadium | 0.0042 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 2:57:55 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:10:20 PM | B91411 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 2:10:20 PM | B91411 |
| Lead | 0.000094 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/29/2022 2:10:20 PM | B91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:10:20 PM | B91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 12:02:21 PM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.014 | 0.0090 | 0.050 | J | mg/L | 1 | 9/30/2022 12:35:00 AM | A91419 |
| Surr: BFB | 99.6 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 12:35:00 AM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.40 | 0.23 | 1.0 | J | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Methyl tert-butyl ether (MTBE) | 1.1 | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,2,4-Trimethylbenzene | 0.17 | 0.12 | 1.0 | J | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,2-Dichloroethane (EDC) | 2.9 | 0.25 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,1-Dichloroethane | 2.9 | 0.27 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,1-Dichloroethene | 4.7 | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Xylenes, Total | 0.80 | 0.37 | 1.5 | J | µg/L | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 119 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Surr: 4-Bromofluorobenzene | 96.9 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Surr: Dibromofluoromethane | 118 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:48:56 PM | B91469 |
| Surr: Toluene-d8 | 99.9 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 8:48:56 PM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209E92-010B

Client Sample ID: MKTF-41

Collection Date: 9/27/2022 11:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 10/4/2022 2:57:01 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 1.9 | 0.016 | 0.064 | | mg/L | 1 | 9/29/2022 9:30:23 PM | 70480 |
| Motor Oil Range Organics (MRO) | 0.061 | 0.052 | 0.080 | J | mg/L | 1 | 9/29/2022 9:30:23 PM | 70480 |
| Surr: DNOP | 104 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 9:30:23 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: 2-Fluorophenol | 44.9 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: Phenol-d5 | 33.9 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: 2,4,6-Tribromophenol | 66.6 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: Nitrobenzene-d5 | 57.5 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: 2-Fluorobiphenyl | 53.2 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| Surr: 4-Terphenyl-d14 | 71.5 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 11:49:02 A | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.9 | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Phenanthrene | 0.42 | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 7:37:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 51.4 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 39.2 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 7:37:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 46.3 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 7:37:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.075 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:08:48 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 11:08:48 AM | 70455 |
| Vanadium | 0.024 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 2:10:52 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:08:48 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:16:40 PM | 70455 |
| Arsenic | 0.0017 | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 2:16:40 PM | 70455 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 2:16:40 PM | 70455 |
| Selenium | 0.035 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:16:40 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 12:04:29 PM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.070 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Vanadium | 0.024 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 3:01:38 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:13:01 PM | B91411 |
| Arsenic | 0.0019 | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 2:13:01 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:13:01 PM | B91411 |
| Selenium | 0.031 | 0.0017 | 0.0050 | | mg/L | 5 | 10/4/2022 11:45:55 AM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 12:10:54 PM | 70473 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 12:54:00 AM | A91419 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 12:54:00 AM | A91419 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Methyl tert-butyl ether (MTBE) | 3.0 | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:12:41 AM | B91469 |
| Surr: Toluene-d8 | 96.7 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:12:41 AM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 3:12:00 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.045 | 0.016 | 0.064 | J | mg/L | 1 | 9/29/2022 10:19:08 PM | 70480 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/29/2022 10:19:08 PM | 70480 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 9/29/2022 10:19:08 PM | 70480 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: 2-Fluorophenol | 45.4 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: Phenol-d5 | 33.2 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: 2,4,6-Tribromophenol | 59.3 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: Nitrobenzene-d5 | 59.9 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: 2-Fluorobiphenyl | 53.9 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| Surr: 4-Terphenyl-d14 | 75.5 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 12:30:23 P | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.28 | 0.11 | 1.0 | J | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 8:25:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.5 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 41.5 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 8:25:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 54.1 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 8:25:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.043 | 0.0016 | 0.0030 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 11:15:11 AM | 70455 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Vanadium | 0.042 | 0.0035 | 0.050 | J | mg/L | 1 | 9/29/2022 2:21:15 PM | 70455 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 11:15:11 AM | 70455 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:19:07 PM | 70455 |
| Arsenic | 0.00065 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/30/2022 2:19:07 PM | 70455 |
| Lead | 0.00014 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/30/2022 2:19:07 PM | 70455 |
| Selenium | 0.0024 | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:19:07 PM | 70455 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 12:13:03 PM | 70474 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022 11:35:00 AM

Lab ID: 2209E92-011E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.041 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Vanadium | 0.037 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 3:05:44 PM | A91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:15:43 PM | B91411 |
| Arsenic | 0.00064 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:15:43 PM | B91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:15:43 PM | B91411 |
| Selenium | 0.0025 | 0.0017 | 0.0050 | J | mg/L | 5 | 10/4/2022 11:48:36 AM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/29/2022 12:15:11 PM | 70474 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-27-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/27/2022

Lab ID: 2209E92-012A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 2-Butanone | 7.5 | 2.0 | 10 | J | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:39:37 AM | B91469 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 2:39:37 AM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209E92-013A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Surr: 1,2-Dichloroethane-d4 | 113 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 1:45:48 AM | B91469 |
| Surr: Toluene-d8 | 99.7 | 0 | 70-130 | | %Rec | 1 | 10/1/2022 1:45:48 AM | B91469 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209E92

Date Reported: 10/24/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|------------|
| CLIENT: | Marathon | Client Sample ID: | Trip Blank |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | |
| Lab ID: | 2209E92-013B | Matrix: | Trip Blank |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 3:27:01 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



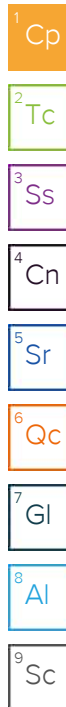
ANALYTICAL REPORT

October 06, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1541103
Samples Received: 09/29/2022
Project Number:
Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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2209E92-001F EB-09-27-22 L1541103-01 GW

Collected by

Collected date/time

Received date/time

09/27/22 08:00

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935264 | 1 | 10/04/22 08:30 | 10/04/22 19:52 | LDT | Mt. Juliet, TN |

¹ Cp² Tc³ Ss

2209E92-002F OW-1 L1541103-02 GW

Collected by

Collected date/time

Received date/time

09/27/22 08:35

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935264 | 1 | 10/04/22 08:30 | 10/04/22 19:54 | LDT | Mt. Juliet, TN |

⁴ Cn⁵ Sr

2209E92-003F BW-4B L1541103-03 GW

Collected by

Collected date/time

Received date/time

09/27/22 09:20

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935264 | 1 | 10/04/22 08:30 | 10/04/22 19:58 | LDT | Mt. Juliet, TN |

⁶ Qc⁷ Gl

2209E92-004F BW-5C L1541103-04 GW

Collected by

Collected date/time

Received date/time

09/27/22 09:45

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935264 | 1 | 10/04/22 08:30 | 10/04/22 20:01 | LDT | Mt. Juliet, TN |

⁸ Al⁹ Sc

2209E92-005F BW-5B L1541103-05 GW

Collected by

Collected date/time

Received date/time

09/27/22 10:00

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:19 | LDT | Mt. Juliet, TN |

2209E92-006F MKTF-44 L1541103-06 GW

Collected by

Collected date/time

Received date/time

09/27/22 10:20

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:20 | LDT | Mt. Juliet, TN |

2209E92-007F MKTF-43 L1541103-07 GW

Collected by

Collected date/time

Received date/time

09/27/22 10:40

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:21 | LDT | Mt. Juliet, TN |

2209E92-008F OW-10 L1541103-08 GW

Collected by

Collected date/time

Received date/time

09/27/22 11:00

09/29/22 09:30

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:22 | LDT | Mt. Juliet, TN |

2209E92-009F MKTF-32 L1541103-09 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 09/27/22 11:15 | 09/29/22 09:30 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:23 | LDT | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

2209E92-0010F MKTF-41 L1541103-10 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 09/27/22 11:35 | 09/29/22 09:30 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 2 | 10/05/22 08:50 | 10/05/22 17:24 | LDT | Mt. Juliet, TN |

⁴Cn

⁵Sr

⁶Qc

2209E92-0011F DUP-9-27-22 L1541103-11 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 09/27/22 11:35 | 09/29/22 09:30 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:27 | LDT | Mt. Juliet, TN |

⁷Gl

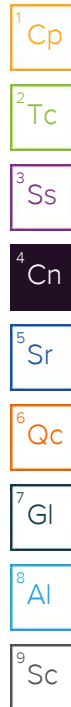
⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Collected date/time: 09/27/22 08:00

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/04/2022 19:52 | WG1935264 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 09/27/22 08:35

L1541103

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/04/2022 19:54 | WG1935264 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/27/22 09:20

L1541103

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/04/2022 19:58 | WG1935264 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/04/2022 20:01 | WG1935264 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:19 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:20 | WG1935876 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:21 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:22 | WG1935876 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:23 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|--------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.0100 | 2 | 10/05/2022 17:24 | WG1935876 |

Sample Narrative:

L1541103-10 WG1935876: Dilution due to NO2NO3 interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:27 | WG1935876 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3844690-1 10/04/22 19:32

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1541103-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1541103-01 10/04/22 19:52 • (DUP) R3844690-3 10/04/22 19:53

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1541103-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1541103-02 10/04/22 19:54 • (DUP) R3844690-4 10/04/22 19:57

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3844690-2 10/04/22 19:33

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.105 | 105 | 87.1-120 | |

L1541103-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1541103-03 10/04/22 19:58 • (MS) R3844690-5 10/04/22 19:59 • (MSD) R3844690-6 10/04/22 20:00

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0983 | 0.0956 | 98.3 | 95.6 | 1 | 90.0-110 | | | 2.78 | 20 |

Method Blank (MB)

(MB) R3845183-1 10/05/22 17:15

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1541617-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1541617-02 10/05/22 17:30 • (DUP) R3845183-3 10/05/22 17:31

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1541658-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1541658-01 10/05/22 17:32 • (DUP) R3845183-4 10/05/22 17:33

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3845183-2 10/05/22 17:16

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.106 | 106 | 87.1-120 | |

L1541658-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1541658-02 10/05/22 17:34 • (MS) R3845183-5 10/05/22 17:35 • (MSD) R3845183-6 10/05/22 17:36

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.103 | 0.102 | 103 | 102 | 1 | 90.0-110 | | | 0.976 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

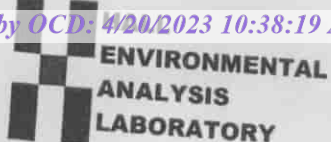
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

J218

| | | | | | | | |
|--|--|------------------|--|-----------------------|--|---------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | EMAIL: | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|-------------------------|
| 1 | 2209E92-001F | EB-09-27-22 | 500AMBHDP | Groundw | 9/27/2022 8:00:00 AM | 1 | Total Cyanide J and MDL |
| 2 | 2209E92-002F | OW-1 | 500AMBHDP | Groundw | 9/27/2022 8:35:00 AM | 1 | Total Cyanide J and MDL |
| 3 | 2209E92-003F | BW-4B | 500AMBHDP | Groundw | 9/27/2022 9:20:00 AM | 1 | Total Cyanide J and MDL |
| 4 | 2209E92-004F | BW-5C | 500AMBHDP | Groundw | 9/27/2022 9:45:00 AM | 1 | Total Cyanide J and MDL |
| 5 | 2209E92-005F | BW-5B | 500AMBHDP | Groundw | 9/27/2022 10:00:00 AM | 1 | Total Cyanide J and MDL |
| 6 | 2209E92-006F | MKTF-44 | 500AMBHDP | Groundw | 9/27/2022 10:20:00 AM | 1 | Total Cyanide J and MDL |
| 7 | 2209E92-007F | MKTF-43 | 500AMBHDP | Groundw | 9/27/2022 10:40:00 AM | 1 | Total Cyanide J and MDL |
| 8 | 2209E92-008F | OW-10 | 500AMBHDP | Groundw | 9/27/2022 11:00:00 AM | 1 | Total Cyanide J and MDL |
| 9 | 2209E92-009F | MKTF-32 | 500AMBHDP | Groundw | 9/27/2022 11:15:00 AM | 1 | Total Cyanide J and MDL |
| 10 | 2209E92-010F | MKTF-41 | 500AMBHDP | Groundw | 9/27/2022 11:35:00 AM | 1 | Total Cyanide J and MDL |
| 11 | 2209E92-011F | DUP-9-27-22 | 500AMBHDP | Groundw | 9/27/2022 11:35:00 AM | 1 | Total Cyanide J and MDL |

L1541103

0221 5755 8093 2518
Cont.-11 TB-D

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Sample Receipt Checklist

| | | |
|--------------------------|--|--|
| COC Seal Present/Intact: | ☒ Y ☐ N | If Applicable |
| COC Signed/Accurate: | ☒ Y ☐ N | VOA Zero Headspace: ☐ Y ☐ N |
| Bottles arrive intact: | ☒ Y ☐ N | Pres. Correct/Check: ☐ Y ☐ N |
| Correct bottles used: | ☒ Y ☐ N | |
| Sufficient volume sent: | ☒ Y ☐ N | |
| RAD Screen <0.5 mR/hr: | ☒ Y ☐ N | |

| | | | | | |
|----------------------|-----------------|---------------|--------------------------|---------------|------------|
| Relinquished By: CMC | Date: 9/28/2022 | Time: 8:14 AM | Received By: [Signature] | Date: 9/29/22 | Time: 0930 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 0.240 ± 0.2 °C Attempt to Cool ?

Comments:

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70455 | | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70455 | | RunNo: 91434 | | | | | | |
| Prep Date: 9/28/2022 | | Analysis Date: 9/29/2022 | | SeqNo: 3273995 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|----|--------|--|--|--|--|--|--|--|--|
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-70455 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70455 | | RunNo: 91434 | | | | | | |
| Prep Date: 9/28/2022 | | Analysis Date: 9/29/2022 | | SeqNo: 3273996 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|--------|--------|----------|---|------|----|-----|--|--|---|
| Barium | 0.0024 | 0.0030 | 0.002000 | 0 | 120 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.9 | 50 | 150 | | | J |
| Cadmium | 0.0027 | 0.0020 | 0.002000 | 0 | 133 | 50 | 150 | | | |
| Chromium | 0.0051 | 0.0060 | 0.006000 | 0 | 85.1 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Silver | 0.0044 | 0.0050 | 0.005000 | 0 | 87.3 | 50 | 150 | | | J |
| Vanadium | 0.0096 | 0.050 | 0.01000 | 0 | 96.3 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-70455 | | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70455 | | RunNo: 91434 | | | | | | |
| Prep Date: 9/28/2022 | | Analysis Date: 9/29/2022 | | SeqNo: 3273997 | | Units: mg/L | | | | |
| Analyte | Result | POL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------|-------|--------|--------|---|------|----|-----|--|--|--|
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 97.3 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.7 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.9 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Silver | 0.092 | 0.0050 | 0.1000 | 0 | 92.0 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70455 | | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70455 | | RunNo: 91484 | | | | | | |
| Prep Date: 9/28/2022 | | Analysis Date: 10/3/2022 | | SeqNo: 3276568 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|--------|----|-------|--|--|--|--|--|--|--|--|
| Nickel | ND | 0.010 | | | | | | | | |
|--------|----|-------|--|--|--|--|--|--|--|--|

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70455 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70455 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276568 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70455 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70455 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276569 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.0035 | 0.010 | 0.005000 | 0 | 69.1 | 50 | 150 | | | J |
| Zinc | 0.0071 | 0.010 | 0.01000 | 0 | 70.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70455 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70455 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276570 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279588 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279589 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.5 | 50 | 150 | | | J |
| Beryllium | 0.0013 | 0.0020 | 0.002000 | 0 | 64.9 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 111 | 50 | 150 | | | |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 98.2 | 50 | 150 | | | J |
| Cobalt | 0.0060 | 0.0060 | 0.006000 | 0 | 99.8 | 50 | 150 | | | J |
| Nickel | 0.0055 | 0.010 | 0.005000 | 0 | 110 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 104 | 50 | 150 | | | |
| Vanadium | 0.0073 | 0.050 | 0.01000 | 0 | 72.8 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 103 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279590 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.8 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.0 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.5 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: A91411 | | RunNo: 91411 | | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | SeqNo: 3272724 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A91411 | | RunNo: 91411 | | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | SeqNo: 3272725 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 99.9 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: LCSW | | Batch ID: A91411 | | | RunNo: 91411 | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | | SeqNo: 3272726 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70455 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70455 | | RunNo: 91465 | | | | | | |
| Prep Date: 9/28/2022 | | Analysis Date: 9/30/2022 | | SeqNo: 3275543 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70455 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 70455 | | | RunNo: 91465 | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 9/30/2022 | | | SeqNo: 3275544 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00096 | 0.0010 | 0.001000 | 0 | 95.7 | 50 | 150 | | | J |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 99.0 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70455 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 70455 | | RunNo: 91465 | | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 9/30/2022 | | SeqNo: 3275544 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00085 | 0.0010 | 0.001000 | 0 | 84.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-70455 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 70455 | | RunNo: 91465 | | | | | | | |
| Prep Date: 9/28/2022 | Analysis Date: 9/30/2022 | | SeqNo: 3275545 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.0 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.7 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 98.9 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272668 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272669 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 99.9 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272670 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272672 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272673 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00097 | 0.0010 | 0.001000 | 0 | 96.9 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.6 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272673 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272674 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.8 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.3 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.5 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91488 | RunNo: 91488 | | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276766 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91488 | RunNo: 91488 | | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276767 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00060 | 0.0010 | 0.001000 | 0 | 59.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91488 | RunNo: 91488 | | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276768 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209E92-002EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: OW-1 | Batch ID: B91488 | RunNo: 91488 | | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276794 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.032 | 0.0010 | 0.02500 | 0.002459 | 118 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--|--------|---------------------------------|-----------|-------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: 2209E92-002EMSDL SampType: MSD TestCode: EPA 200.8: Dissolved Metals | | | | | | | | | | |
| Client ID: OW-1 | | Batch ID: B91488 | | | RunNo: 91488 | | | | | |
| Prep Date: | | Analysis Date: 10/3/2022 | | | SeqNo: 3276795 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.031 | 0.0010 | 0.02500 | 0.002459 | 112 | 70 | 130 | 4.34 | 20 | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: PBW | | Batch ID: A91522 | | RunNo: 91522 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3278154 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A91522 | | RunNo: 91522 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3278155 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 123 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A91522 | | RunNo: 91522 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3278156 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70473 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 70473 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272738 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70473 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70473 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272739 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00014 | 0.00020 | 0.0001500 | 0 | 91.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70473 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 70473 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272740 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70474 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 70474 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272741 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70474 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70474 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272742 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00014 | 0.00020 | 0.0001500 | 0 | 91.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70474 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 70474 | RunNo: 91412 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | SeqNo: 3272743 | | Units: mg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209E92-010DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: MKTF-41 | | Batch ID: 70473 | | RunNo: 91412 | | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/29/2022 | | SeqNo: 3272778 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0044 | 0.00020 | 0.005000 | 0 | 88.3 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|----------------|----------|-------------|-------|----------|------|
| Sample ID: 2209E92-010DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: MKTF-41 | | Batch ID: 70473 | | | RunNo: 91412 | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/29/2022 | | | SeqNo: 3272779 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0044 | 0.00020 | 0.005000 | 0 | 87.9 | 75 | 125 | 0.447 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70493 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279928 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70493 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279929 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70493 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279940 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70493 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279941 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.091 | 0.010 | 0.1000 | 0 | 90.7 | 70 | 130 | 7.71 | 20 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70493 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3285791 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.093 | 0.010 | 0.1000 | 0 | 93.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70493 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70493 | RunNo: 91564 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3285792 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.084 | 0.010 | 0.1000 | 0 | 84.5 | 70 | 130 | 10.1 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70480 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70480 | | RunNo: 91421 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | | SeqNo: 3272988 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.043 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 96.9 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70480 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70480 | | RunNo: 91421 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | | SeqNo: 3272989 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 90.9 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70480 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70480 | | RunNo: 91421 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/29/2022 | | SeqNo: 3272990 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 | 0.1875 | 0 | 73.9 | 31.7 | 75.4 | 20.7 | 20 | R |
| Surr: DNOP | 0.018 | | 0.01875 | | 98.4 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A91419 | | RunNo: 91419 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3272963 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 92.6 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 212 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A91419 | | RunNo: 91419 | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | | SeqNo: 3272964 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 104 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: B91469 | | RunNo: 91469 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275865 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 95.8 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: B91469 | | RunNo: 91469 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275905 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: B91469 | RunNo: 91469 | | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | SeqNo: 3275905 | | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: A91498 | RunNo: 91498 | | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3277302 | | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70506 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70506 | RunNo: 91725 | | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/11/2022 | SeqNo: 3288102 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 11 | | 200.0 | | 5.66 | 15 | 84.5 | | | S |
| Surr: Phenol-d5 | 20 | | 200.0 | | 9.97 | 15 | 67 | | | S |
| Surr: 2,4,6-Tribromophenol | 16 | | 200.0 | | 7.90 | 15 | 108 | | | S |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 33 | | 100.0 | | 32.9 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 69 | | 100.0 | | 68.7 | 34.4 | 134 | | | |

| Sample ID: LCS-70506 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70506 | RunNo: 91725 | | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/11/2022 | SeqNo: 3288103 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70506 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70506 | | RunNo: 91725 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/11/2022 | | SeqNo: 3288103 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 61 | 10 | 100.0 | 0 | 60.5 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 46.5 | 15 | 89.8 | | | |
| Phenol | 78 | 20 | 200.0 | 0 | 39.0 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 74.6 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 92 | | 200.0 | | 45.9 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.5 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 53.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 85.2 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70506 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70506 | | RunNo: 91725 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/11/2022 | | SeqNo: 3288104 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 49 | 10 | 100.0 | 0 | 49.3 | 21.3 | 104 | 20.5 | 45.3 | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 38.0 | 15 | 89.8 | 20.1 | 39.6 | |
| Phenol | 64 | 20 | 200.0 | 0 | 32.1 | 17 | 61.1 | 19.4 | 42.5 | |
| Pyrene | 73 | 10 | 100.0 | 0 | 73.4 | 61 | 123 | 1.59 | 11.8 | |
| Surr: 2-Fluorophenol | 79 | | 200.0 | | 39.5 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 59 | | 200.0 | | 29.7 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 54.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 51.8 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 45.4 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 85 | | 100.0 | | 84.8 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70506 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70506 | | RunNo: 91491 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277033 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 31 | | 100.0 | | 31.2 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 13 | | 200.0 | | 6.32 | 15 | 112 | | | S |
| Surr: 2-Fluorobiphenyl | 27 | | 100.0 | | 26.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 49 | | 100.0 | | 48.8 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70506-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70506 | | RunNo: 91491 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277034 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.84 | 0.30 | 2.000 | 0 | 42.0 | 15 | 60.5 | | | |
| Naphthalene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 15 | 96 | | | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 101 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.3 | 0.30 | 2.000 | 0 | 113 | 32 | 132 | | | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 65.8 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209E92

24-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70506-If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70506 | | | RunNo: 91491 | | | | | |
| Prep Date: 9/30/2022 | | Analysis Date: 10/3/2022 | | | SeqNo: 3277034 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.5 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.7 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 64 | | 100.0 | | 63.9 | 15 | 166 | | | |

| Sample ID: Icsd-70506-If | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|---------------------------------|------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 70506 | | | RunNo: 91491 | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | | SeqNo: 3277035 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.30 | 2.000 | 0 | 31.0 | 15 | 60.5 | 30.1 | 29.7 | R |
| Naphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 78.3 | 41.6 | 31.7 | R |
| 1-Methylnaphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 79.6 | 43.1 | 31.4 | R |
| 2-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 15 | 78.6 | 44.0 | 30.5 | R |
| Acenaphthene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 92 | 38.0 | 30.5 | R |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 96 | 23.2 | 25.1 | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 21 | 103 | 31.9 | 26.4 | R |
| Anthracene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 21.1 | 106 | 31.8 | 14.4 | R |
| Fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 32.8 | 119 | 29.5 | 14.8 | R |
| Pyrene | 1.4 | 1.0 | 2.000 | 0 | 68.0 | 34.1 | 110 | 27.8 | 19.2 | R |
| Benz(a)anthracene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 32 | 132 | 28.3 | 29.3 | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 31.3 | 112 | 26.3 | 19 | R |
| Benzo(b)fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 34.1 | 119 | 27.3 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 24.7 | 152 | 30.4 | 21.3 | R |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 51.0 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 66 | | 200.0 | | 32.8 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 43 | | 100.0 | | 42.6 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 46 | | 100.0 | | 46.4 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209E92

RcptNo: 1

Received By: Juan Rojas

9/28/2022 7:25:00 AM

Juan Rojas

Completed By: Cheyenne Cason

9/28/2022 8:05:25 AM

*Cason*Reviewed By: *sa* 9/28/22Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 22 11
(<2 or >12 unless noted)

Adjusted? NOChecked by: *sa 9/28/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.9 | Good | Yes | | | |
| 2 | 2.0 | Good | Yes | | | |
| 3 | 2.2 | Good | Yes | | | |
| 4 | 1.0 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2209E92**

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 3.0 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 17, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209F93

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 9/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209F93
Date: 10/17/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding EPA Method 8270SIMS:

The method blank had a low surrogate recovery for 2,4,6-Tribromophenol

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 12:13:00 PM | A91437 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 12:13:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Acetone | 12 | 2.5 | 10 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 97.3 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Surr: 4-Bromofluorobenzene | 97.9 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Surr: Dibromofluoromethane | 98.1 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:33:00 PM | R91553 |
| Surr: Toluene-d8 | 95.5 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:33:00 PM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 3:57:07 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.019 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 9:13:44 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 9:13:44 PM | 70492 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 9:13:44 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: 2-Fluorophenol | 41.3 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: Phenol-d5 | 30.4 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: 2,4,6-Tribromophenol | 56.9 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: Nitrobenzene-d5 | 52.3 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 47.8 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 74.0 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 1:11:59 PM | 70506 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/3/2022 9:14:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 49.6 | 0 | 15-108 | | %Rec | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Surr: 2-Fluorobiphenyl | 40.1 | 0 | 15-107 | | %Rec | 1 | 10/3/2022 9:14:00 PM | 70506 |
| Surr: 4-Terphenyl-d14 | 57.8 | 0 | 15-166 | | %Rec | 1 | 10/3/2022 9:14:00 PM | 70506 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 12:38:47 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:21:34 PM | 70489 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/30/2022 2:21:34 PM | 70489 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 2:21:34 PM | 70489 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:21:34 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:23:28 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:30:00 AM

Lab ID: 2209F93-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| Zinc | 0.0048 | 0.0032 | 0.010 | J | mg/L | 1 | 10/4/2022 4:39:43 PM | B91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 10/3/2022 2:50:38 PM | B91488 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 2:18:24 PM | A91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:18:24 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:18:24 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:25:36 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 12:33:00 PM | A91437 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 12:33:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Acetone | 7.1 | 2.5 | 10 | J | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:56:00 PM | R91553 |
| Surr: Toluene-d8 | 95.4 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:56:00 PM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 10/4/2022 4:27:10 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.025 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 9:37:27 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 9:37:27 PM | 70492 |
| Surr: DNOP | 87.5 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 9:37:27 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: 2-Fluorophenol | 55.9 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: Phenol-d5 | 40.8 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 67.9 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: Nitrobenzene-d5 | 64.9 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 63.1 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 78.8 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 3:58:09 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 1:45:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 73.5 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 62.0 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 1:45:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 72.0 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 1:45:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.018 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 12:43:32 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/30/2022 2:28:52 PM | 70489 |
| Arsenic | 0.00015 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/30/2022 2:28:52 PM | 70489 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/30/2022 2:28:52 PM | 70489 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/30/2022 2:28:52 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:27:46 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-1C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 9:35:00 AM

Lab ID: 2209F93-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.017 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Nickel | 0.0077 | 0.0033 | 0.010 | J | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| Zinc | 0.024 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 4:44:09 PM | B91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:21:05 PM | A91411 |
| Arsenic | 0.00017 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:21:05 PM | A91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:21:05 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:21:05 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:29:55 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:15:00 AM

Lab ID: 2209F93-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 4:19:00 PM | A91437 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:19:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 98.4 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Surr: 4-Bromofluorobenzene | 98.5 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:19:00 PM | R91553 |
| Surr: Toluene-d8 | 95.2 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:19:00 PM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209F93-003B

Client Sample ID: BW-2C

Collection Date: 9/28/2022 10:15:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 4:42:09 AM | 70493 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:15:00 AM

Lab ID: 2209F93-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.65 | 0.016 | 0.064 | | mg/L | 1 | 10/3/2022 10:01:08 PM | 70492 |
| Motor Oil Range Organics (MRO) | 0.62 | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 10:01:08 PM | 70492 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 10:01:08 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: 2-Fluorophenol | 53.4 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: Phenol-d5 | 40.4 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 68.1 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: Nitrobenzene-d5 | 65.9 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 61.6 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 77.7 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 4:39:34 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 2:30:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:15:00 AM

Lab ID: 2209F93-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 74.2 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 62.0 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 2:30:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 70.3 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 2:30:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:15:00 AM

Lab ID: 2209F93-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.039 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Chromium | 0.0062 | 0.0020 | 0.0060 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Vanadium | 0.0056 | 0.0035 | 0.050 | J | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 12:52:42 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/5/2022 3:27:06 PM | 70489 |
| Arsenic | 0.0011 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 3:27:06 PM | 70489 |
| Lead | 0.00090 | 0.00019 | 0.00050 | | mg/L | 1 | 10/5/2022 3:27:06 PM | 70489 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/5/2022 3:27:06 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:32:05 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:15:00 AM

Lab ID: 2209F93-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.016 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| Zinc | 0.018 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 4:48:09 PM | B91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:29:10 PM | A91411 |
| Arsenic | 0.00080 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:29:10 PM | A91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:29:10 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:29:10 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:34:15 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:35:00 AM

Lab ID: 2209F93-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 4:39:00 PM | A91437 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:39:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Acetone | 3.8 | 2.5 | 10 | J | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Surr: 4-Bromofluorobenzene | 97.5 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:42:00 PM | R91553 |
| Surr: Toluene-d8 | 94.4 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:42:00 PM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:35:00 AM

Lab ID: 2209F93-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 5:35:31 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:35:00 AM

Lab ID: 2209F93-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.049 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 10:24:48 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 10:24:48 PM | 70492 |
| Surr: DNOP | 99.6 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 10:24:48 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: 2-Fluorophenol | 58.0 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: Phenol-d5 | 42.2 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 72.3 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: Nitrobenzene-d5 | 67.2 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 62.9 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 5:20:49 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 3:15:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209F93-004C

Client Sample ID: BW-2B

Collection Date: 9/28/2022 10:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 72.2 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 59.9 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 3:15:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 70.3 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 3:15:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:35:00 AM

Lab ID: 2209F93-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.047 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Chromium | 0.0029 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Cobalt | 0.0063 | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| Zinc | 0.26 | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 12:57:10 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:03:46 PM | 70489 |
| Arsenic | 0.00064 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/5/2022 3:34:27 PM | 70489 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:03:46 PM | 70489 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:03:46 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:36:23 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-2B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 10:35:00 AM

Lab ID: 2209F93-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.039 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| Zinc | 0.043 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 4:52:09 PM | B91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:31:51 PM | A91411 |
| Arsenic | 0.00053 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:31:51 PM | A91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:31:51 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:31:51 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:42:47 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 4:58:00 PM | A91437 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 4:58:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Surr: 4-Bromofluorobenzene | 98.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Surr: Dibromofluoromethane | 98.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:05:00 AM | R91553 |
| Surr: Toluene-d8 | 95.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:05:00 AM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 6:20:52 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 10/3/2022 10:48:27 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 10:48:27 PM | 70492 |
| Surr: DNOP | 91.6 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 10:48:27 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: 2-Fluorophenol | 50.3 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: Phenol-d5 | 37.3 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 70.0 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: Nitrobenzene-d5 | 60.0 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 58.4 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 77.6 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 6:03:05 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 4:00:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 74.2 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 62.2 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 4:00:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 74.9 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 4:00:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.036 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Chromium | 0.0040 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 1:01:51 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:06:13 PM | 70489 |
| Arsenic | 0.00085 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/5/2022 3:36:53 PM | 70489 |
| Lead | 0.00037 | 0.00019 | 0.00050 | J | mg/L | 1 | 10/6/2022 3:06:13 PM | 70489 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:06:13 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:44:55 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3C

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:00:00 AM

Lab ID: 2209F93-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.023 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| Zinc | 0.028 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 4:56:17 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00057 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:34:32 PM | A91411 |
| Arsenic | 0.00078 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:34:32 PM | A91411 |
| Lead | 0.000088 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/29/2022 2:34:32 PM | A91411 |
| Selenium | 0.00067 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:34:32 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:47:04 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 5:18:00 PM | A91437 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:18:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Surr: 4-Bromofluorobenzene | 99.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:28:00 AM | R91553 |
| Surr: Toluene-d8 | 95.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:28:00 AM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 6:51:04 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.021 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 11:12:07 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 11:12:07 PM | 70492 |
| Surr: DNOP | 77.8 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 11:12:07 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: 2-Fluorophenol | 63.3 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: Phenol-d5 | 45.6 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 84.0 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: Nitrobenzene-d5 | 72.2 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 70.8 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 86.7 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 6:45:19 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 4:44:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** BW-3B**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/28/2022 11:30:00 AM**Lab ID:** 2209F93-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.2 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 63.4 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 4:44:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 70.6 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 4:44:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.14 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Chromium | 0.0078 | 0.0020 | 0.0060 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Cobalt | 0.0042 | 0.0035 | 0.0060 | J | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Vanadium | 0.0046 | 0.0035 | 0.050 | J | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 1:06:33 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:08:39 PM | 70489 |
| Arsenic | 0.0051 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 3:39:20 PM | 70489 |
| Lead | 0.0012 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:08:39 PM | 70489 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:08:39 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:49:12 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-3B

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.10 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Cobalt | 0.0025 | 0.0024 | 0.0060 | J | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| Zinc | 0.30 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:06:47 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0013 | 0.00044 | 0.0010 | | mg/L | 1 | 9/29/2022 2:37:13 PM | A91411 |
| Arsenic | 0.0042 | 0.00012 | 0.0010 | | mg/L | 1 | 9/29/2022 2:37:13 PM | A91411 |
| Lead | 0.000070 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/29/2022 2:37:13 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:37:13 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:51:20 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/30/2022 5:37:00 PM | A91437 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 9/30/2022 5:37:00 PM | A91437 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Acetone | 11 | 2.5 | 10 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Surr: 1,2-Dichloroethane-d4 | 98.1 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Surr: 4-Bromofluorobenzene | 98.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:51:00 AM | R91553 |
| Surr: Toluene-d8 | 93.8 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:51:00 AM | R91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 10/4/2022 7:21:18 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.018 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 11:35:47 PM | 70492 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 11:35:47 PM | 70492 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 11:35:47 PM | 70492 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: 2-Fluorophenol | 47.1 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: Phenol-d5 | 33.9 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 65.9 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: Nitrobenzene-d5 | 54.3 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 80.0 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 7:27:41 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 5:28:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.6 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 51.3 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 5:28:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 66.8 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 5:28:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.018 | 0.0016 | 0.0030 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Chromium | 0.0024 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/3/2022 1:17:16 PM | 70489 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:11:06 PM | 70489 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 3:41:46 PM | 70489 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:11:06 PM | 70489 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:11:06 PM | 70489 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:53:28 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022

Lab ID: 2209F93-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.017 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| Zinc | 0.026 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:10:50 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00055 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:39:55 PM | A91411 |
| Arsenic | 0.00015 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/29/2022 2:39:55 PM | A91411 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/29/2022 2:39:55 PM | A91411 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/29/2022 2:39:55 PM | A91411 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 11:59:55 AM | 70626 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-28-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/28/2022 11:30:00 AM

Lab ID: 2209F93-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Acetone | 4.8 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 2-Butanone | 16 | 2.0 | 10 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Surr: 4-Bromofluorobenzene | 96.8 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 3:09:00 AM | B91553 |
| Surr: Toluene-d8 | 94.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 3:09:00 AM | B91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209F93-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Acetone | 3.4 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Surr: 1,2-Dichloroethane-d4 | 99.1 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Surr: 4-Bromofluorobenzene | 98.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 4:18:00 AM | B91553 |
| Surr: Toluene-d8 | 94.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 4:18:00 AM | B91553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209F93

Date Reported: 10/17/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209F93-009B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 7:51:28 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

October 06, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1541658

Samples Received: 09/30/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2209F93-001F EB-09-28-22 L1541658-01 | 5 | |
| 2209F93-002F BW-1C L1541658-02 | 6 | ⁴ Cn |
| 2209F93-003F BW-2C L1541658-03 | 7 | ⁵ Sr |
| 2209F93-004F BW-2B L1541658-04 | 8 | |
| 2209F93-005F BW-3C L1541658-05 | 9 | ⁶ Qc |
| 2209F93-006F BW-3B L1541658-06 | 10 | |
| 2209F93-007F DUP-9-28-22 L1541658-07 | 11 | ⁷ Gl |
| Qc: Quality Control Summary | 12 | ⁸ Al |
| Wet Chemistry by Method 4500CN E-2016 | 12 | |
| Gl: Glossary of Terms | 13 | ⁹ Sc |
| Al: Accreditations & Locations | 14 | |
| Sc: Sample Chain of Custody | 15 | |

2209F93-001F EB-09-28-22 L1541658-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:32 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time



2209F93-002F BW-1C L1541658-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:34 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209F93-003F BW-2C L1541658-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:39 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209F93-004F BW-2B L1541658-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:40 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209F93-005F BW-3C L1541658-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:41 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209F93-006F BW-3B L1541658-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:42 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209F93-007F DUP-9-28-22 L1541658-07 GW

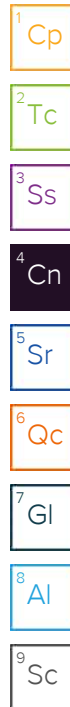
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1935876 | 1 | 10/05/22 08:50 | 10/05/22 17:43 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:32 | WG1935876 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:34 | WG1935876 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:39 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:40 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:41 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:42 | WG1935876 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/05/2022 17:43 | WG1935876 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3845183-1 10/05/22 17:15

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1541617-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1541617-02 10/05/22 17:30 • (DUP) R3845183-3 10/05/22 17:31

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1541658-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1541658-01 10/05/22 17:32 • (DUP) R3845183-4 10/05/22 17:33

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3845183-2 10/05/22 17:16

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.106 | 106 | 87.1-120 | |

L1541658-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1541658-02 10/05/22 17:34 • (MS) R3845183-5 10/05/22 17:35 • (MSD) R3845183-6 10/05/22 17:36

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.103 | 0.102 | 103 | 102 | 1 | 90.0-110 | | | 0.976 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

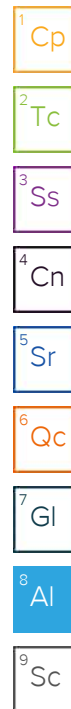
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

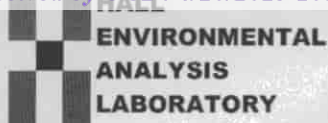
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

J106

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|--|--------------|------------------|-------------|-----------------------|-----------------------|---------------------|------------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2209F93-001F | EB-09-28-22 | 500AMBHDP | Groundw | 9/28/2022 9:30:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2209F93-002F | BW-1C | 500AMBHDP | Groundw | 9/28/2022 9:35:00 AM | 1 | Total Cyanide J and MDL - 02 |
| 3 | 2209F93-003F | BW-2C | 500AMBHDP | Groundw | 9/28/2022 10:15:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2209F93-004F | BW-2B | 500AMBHDP | Groundw | 9/28/2022 10:35:00 AM | 1 | Total Cyanide J and MDL - 04 |
| 5 | 2209F93-005F | BW-3C | 500AMBHDP | Groundw | 9/28/2022 11:00:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2209F93-006F | BW-3B | 500AMBHDP | Groundw | 9/28/2022 11:30:00 AM | 1 | Total Cyanide J and MDL - 06 |
| 7 | 2209F93-007F | DUP-9-28-22 | 500AMBHDP | Groundw | 9/28/2022 | 1 | Total Cyanide J and MDL - 07 |

CONT. - 7

TB-0

0221 5755 8093 2529

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all covers and caps for reanalysis.

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

| | | | | | |
|--|-----------------|---------------|--------------------------|----------------|------------|
| Relinquished By: CMC | Date: 9/29/2022 | Time: 8:07 AM | Received By: [Signature] | Date: 09/30/22 | Time: 1:00 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | |
| REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | | | | | |
| FOR LAB USE ONLY
Temp of samples 3.40 = 3.1 °C Attempt to Cool? _____
Comments: _____ | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70489 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70489 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276571 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70489 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70489 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276572 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0015 | 0.0020 | 0.002000 | 0 | 77.4 | 50 | 150 | | | J |
| Chromium | 0.0066 | 0.0060 | 0.006000 | 0 | 111 | 50 | 150 | | | |
| Cobalt | 0.0081 | 0.0060 | 0.006000 | 0 | 135 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 80.9 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 95.7 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70489 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70489 | RunNo: 91484 | | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | SeqNo: 3276573 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 94.2 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279591 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279592 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.7 | 50 | 150 | | | J |
| Beryllium | 0.0012 | 0.0020 | 0.002000 | 0 | 61.9 | 50 | 150 | | | J |
| Cadmium | 0.0023 | 0.0020 | 0.002000 | 0 | 113 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Cobalt | 0.0071 | 0.0060 | 0.006000 | 0 | 118 | 50 | 150 | | | |
| Nickel | 0.0051 | 0.010 | 0.005000 | 0 | 103 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 99.0 | 50 | 150 | | | J |
| Vanadium | 0.0076 | 0.050 | 0.01000 | 0 | 75.6 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279593 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279594 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279595 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0013 | 0.0020 | 0.002000 | 0 | 67.2 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 123 | 50 | 150 | | | |
| Chromium | 0.0065 | 0.0060 | 0.006000 | 0 | 109 | 50 | 150 | | | |
| Cobalt | 0.0069 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0037 | 0.010 | 0.005000 | 0 | 74.7 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.2 | 50 | 150 | | | J |
| Vanadium | 0.0076 | 0.050 | 0.01000 | 0 | 75.9 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 137 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279596 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.0 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID: 2209F93-007EMS | | SampType: MS | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | |
| Client ID: DUP-9-28-22 | | Batch ID: C91551 | | | RunNo: 91551 | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | | SeqNo: 3279706 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0.01735 | 100 | 70 | 130 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.0 | 70 | 130 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.7 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.4 | 70 | 130 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.5 | 70 | 130 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.6 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.1 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.02585 | 96.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|-------|----------|------|
| Sample ID: 2209F93-007EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: DUP-9-28-22 | | Batch ID: C91551 | | RunNo: 91551 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3279707 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0.01735 | 101 | 70 | 130 | 0.769 | 20 | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.0 | 70 | 130 | 1.06 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.1 | 70 | 130 | 0.407 | 20 | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.5 | 70 | 130 | 1.07 | 20 | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 70 | 130 | 0.402 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.5 | 70 | 130 | 0.835 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | 0.215 | 20 | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.8 | 70 | 130 | 0.671 | 20 | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.02585 | 97.5 | 70 | 130 | 0.840 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: A91411 | | | RunNo: 91411 | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | | SeqNo: 3272724 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A91411 | | RunNo: 91411 | | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | SeqNo: 3272725 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 99.9 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Selenium | 0.00084 | 0.0010 | 0.001000 | 0 | 84.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: A91411 | | | RunNo: 91411 | | | | | |
| Prep Date: | | Analysis Date: 9/29/2022 | | | SeqNo: 3272726 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.8 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-70489 | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: 70489 | | | RunNo: 91465 | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/30/2022 | | | SeqNo: 3275551 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209F93-001DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB-09-28-22 | | Batch ID: 70489 | | RunNo: 91465 | | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/30/2022 | | SeqNo: 3275628 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: 2209F93-001DMSLL | | SampType: MS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: EB-09-28-22 | | Batch ID: 70489 | | | RunNo: 91465 | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/30/2022 | | | SeqNo: 3275628 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 70 | 130 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2209F93-001DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB-09-28-22 | | Batch ID: 70489 | | RunNo: 91465 | | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/30/2022 | | SeqNo: 3275629 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | 0.796 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 106 | 70 | 130 | 2.97 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 104 | 70 | 130 | 1.36 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 70 | 130 | 3.68 | 20 | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70489 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70489 | | RunNo: 91465 | | | | | | |
| Prep Date: 9/29/2022 | | Analysis Date: 9/30/2022 | | SeqNo: 3275643 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00096 | 0.0010 | 0.001000 | 0 | 95.8 | 50 | 150 | | | J |
| Arsenic | 0.00097 | 0.0010 | 0.001000 | 0 | 97.1 | 50 | 150 | | | J |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.5 | 50 | 150 | | | J |
| Selenium | 0.0015 | 0.0010 | 0.001000 | 0 | 149 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-70489 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 70489 | | RunNo: 91465 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 9/30/2022 | | SeqNo: 3275644 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.7 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272668 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272669 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 99.9 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 108 | 50 | 150 | | | |
| Selenium | 0.00084 | 0.0010 | 0.001000 | 0 | 84.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272670 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.8 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209F93-007EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: DUP-9-28-22 | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272717 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0.0005509 | 105 | 70 | 130 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0.0001504 | 109 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 91.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2209F93-007EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: DUP-9-28-22 | Batch ID: A91411 | RunNo: 91411 | | | | | | | | |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272718 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0.0005509 | 104 | 70 | 130 | 0.316 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: 2209F93-007EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: DUP-9-28-22 | Batch ID: A91411 | RunNo: 91411 |
| Prep Date: | Analysis Date: 9/29/2022 | SeqNo: 3272718 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.028 | 0.0010 0.02500 0.0001504 110 70 130 1.08 20 |
| Lead | 0.012 | 0.00050 0.01250 0 93.7 70 130 2.02 20 |

| | | |
|----------------|--------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: B91488 | RunNo: 91488 |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276766 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |

| | | |
|--------------------|--------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BatchQC | Batch ID: B91488 | RunNo: 91488 |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276767 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0010 | 0.0010 0.001000 0 104 50 150 |

| | | |
|-----------------|--------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: LCSW | Batch ID: B91488 | RunNo: 91488 |
| Prep Date: | Analysis Date: 10/3/2022 | SeqNo: 3276768 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.026 | 0.0010 0.02500 0 103 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70626 | | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: PBW | | Batch ID: 70626 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281395 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | | |
|-------------------------------|--|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70626 | | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | | Batch ID: 70626 | | RunNo: 91595 | | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281396 | | Units: mg/L | | | | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | | 0.00014 | 0.00020 | 0.0001500 | 0 | 93.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCS-70626 | | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | | Batch ID: 70626 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281397 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 106 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209F93-007DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: DUP-9-28-22 | | Batch ID: 70626 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281440 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 104 | 75 | 125 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209F93-007DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: DUP-9-28-22 | | Batch ID: 70626 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281441 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 106 | 75 | 125 | 1.85 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70550 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279152 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-70550 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279153 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 117 70 130 |

| | | |
|-----------------------|--------------------------|--|
| Sample ID: LCSD-70550 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279154 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 99.8 70 130 16.0 20 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70550 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279176 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70493 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70493 | RunNo: 91564 |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279928 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70493 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70493 | RunNo: 91564 |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | SeqNo: 3279929 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70493 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70493 | | RunNo: 91564 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3279940 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70493 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70493 | | RunNo: 91564 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3279941 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.091 | 0.010 | 0.1000 | 0 | 90.7 | 70 | 130 | 7.71 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209F93-001BMS | SampType: MS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: EB-09-28-22 | Batch ID: 70493 | | RunNo: 91564 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3279959 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.080 | 0.0094 | 0.09434 | 0 | 85.1 | 65 | 135 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70493 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70493 | | RunNo: 91564 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3285791 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.093 | 0.010 | 0.1000 | 0 | 93.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70493 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70493 | | RunNo: 91564 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3285792 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.084 | 0.010 | 0.1000 | 0 | 84.5 | 70 | 130 | 10.1 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70492 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70492 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277573 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.019 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.036 | | 0.03750 | | 95.6 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70492 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70492 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277575 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 62.9 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.017 | | 0.01875 | | 91.7 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70492 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70492 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/29/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277578 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 | 0.1875 | 0 | 73.8 | 31.7 | 75.4 | 15.9 | 20 | |
| Surr: DNOP | 0.017 | | 0.01875 | | 92.9 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A91437 | | RunNo: 91437 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275406 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.47 | 0.050 | 0.5000 | 0 | 94.8 | 80 | 120 | | | |
| Surr: BFB | 43 | | 20.00 | | 213 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A91437 | | RunNo: 91437 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275407 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 22 | | 20.00 | | 112 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209f93-001a ms | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-09-28-22 | Batch ID: A91437 | | RunNo: 91437 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275415 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.45 | 0.050 | 0.5000 | 0 | 89.1 | 70 | 130 | | | |
| Surr: BFB | 43 | | 20.00 | | 214 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209F93-001A MSD | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: EB-09-28-22 | Batch ID: A91437 | | RunNo: 91437 | | | | | | | |
| Prep Date: | Analysis Date: 9/30/2022 | | SeqNo: 3275416 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 92.0 | 70 | 130 | 3.23 | 20 | |
| Surr: BFB | 43 | | 20.00 | | 214 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3279783 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 95.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 99.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 95.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280459 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280459 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs 2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: B91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3280489 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.3 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.1 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 96.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: B91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3280490 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb 2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3280490 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.8 | | 10.00 | | 97.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 95.1 | 70 | 130 | | | |

| Sample ID: 2209F93-008ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: FB 9-28-22 | Batch ID: B91553 | | RunNo: 91553 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3280492 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 92.5 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 93.2 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 95.2 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 82.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 16 | 1.0 | 20.00 | 0 | 82.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 96.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 96.5 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209F93-008amsd | | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: FB 9-28-22 | | Batch ID: B91553 | | RunNo: 91553 | | | | | | |
| Prep Date: | | Analysis Date: 10/6/2022 | | SeqNo: 3280493 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | 20.5 | 20 | R |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | 17.3 | 20 | |
| Chlorobenzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | 17.7 | 20 | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 98.5 | 70 | 130 | 17.2 | 20 | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | 19.7 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 101 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.7 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.9 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70536 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289568 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 59.9 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 88 | | 200.0 | | 44.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 69.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 71.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 65.8 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 85.7 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70536 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289569 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70536 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289569 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 70 | 10 | 100.0 | 0 | 69.5 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 51 | 5.0 | 100.0 | 0 | 50.6 | 15 | 89.8 | | | |
| Phenol | 98 | 20 | 200.0 | 0 | 48.8 | 17 | 61.1 | | | |
| Pyrene | 83 | 10 | 100.0 | 0 | 83.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 45.1 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 79.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 66.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 91.8 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70536 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289570 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 63.4 | 21.3 | 104 | 9.13 | 45.3 | |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 44.0 | 15 | 89.8 | 14.0 | 39.6 | |
| Phenol | 89 | 20 | 200.0 | 0 | 44.4 | 17 | 61.1 | 9.52 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 79.2 | 61 | 123 | 5.22 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 57.3 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 75.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 64.6 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 93.9 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70506 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70506 | RunNo: 91491 | | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | SeqNo: 3277033 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 31 | | 100.0 | | 31.2 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 13 | | 200.0 | | 6.32 | 15 | 112 | | | S |
| Surr: 2-Fluorobiphenyl | 27 | | 100.0 | | 26.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 49 | | 100.0 | | 48.8 | 15 | 166 | | | |

| Sample ID: lcs-70506-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70506 | RunNo: 91491 | | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | SeqNo: 3277034 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.84 | 0.30 | 2.000 | 0 | 42.0 | 15 | 60.5 | | | |
| Naphthalene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 15 | 96 | | | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 101 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.3 | 0.30 | 2.000 | 0 | 113 | 32 | 132 | | | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 65.8 | 15 | 108 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70506-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70506 | | RunNo: 91491 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277034 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.5 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.7 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 64 | | 100.0 | | 63.9 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70506-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70506 | | RunNo: 91491 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277035 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.30 | 2.000 | 0 | 31.0 | 15 | 60.5 | 30.1 | 29.7 | R |
| Naphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 78.3 | 41.6 | 31.7 | R |
| 1-Methylnaphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 79.6 | 43.1 | 31.4 | R |
| 2-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 15 | 78.6 | 44.0 | 30.5 | R |
| Acenaphthene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 92 | 38.0 | 30.5 | R |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 96 | 23.2 | 25.1 | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 21 | 103 | 31.9 | 26.4 | R |
| Anthracene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 21.1 | 106 | 31.8 | 14.4 | R |
| Fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 32.8 | 119 | 29.5 | 14.8 | R |
| Pyrene | 1.4 | 1.0 | 2.000 | 0 | 68.0 | 34.1 | 110 | 27.8 | 19.2 | R |
| Benz(a)anthracene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 32 | 132 | 28.3 | 29.3 | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 31.3 | 112 | 26.3 | 19 | R |
| Benzo(b)fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 34.1 | 119 | 27.3 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 24.7 | 152 | 30.4 | 21.3 | R |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 51.0 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 66 | | 200.0 | | 32.8 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 43 | | 100.0 | | 42.6 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 46 | | 100.0 | | 46.4 | 15 | 166 | 0 | 0 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70536 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70536 | | RunNo: 91528 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278417 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70536 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70536 | | RunNo: 91528 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278417 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 82 | | 100.0 | | 82.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 86 | | 200.0 | | 42.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 68 | | 100.0 | | 68.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.5 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70536 LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70536 | | RunNo: 91528 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278418 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.50 | 0.30 | 2.000 | 0 | 25.0 | 15 | 60.5 | | | |
| Naphthalene | 0.92 | 0.30 | 2.000 | 0 | 46.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.6 | | | |
| Acenaphthene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 15 | 92 | | | |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 15 | 96 | | | |
| Phenanthrene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 105 | 32.8 | 119 | | | |
| Pyrene | 1.9 | 1.0 | 2.000 | 0 | 95.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 107 | 32 | 132 | | | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 49 | | 100.0 | | 48.7 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 79 | | 200.0 | | 39.3 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 44 | | 100.0 | | 43.6 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 55 | | 100.0 | | 54.5 | 15 | 166 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209F93

17-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: LCSD-70536 LF | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 70536 | | RunNo: 91528 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278419 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.88 | 0.30 | 2.000 | 0 | 44.0 | 15 | 60.5 | 55.1 | 29.7 | R |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 15 | 78.3 | 38.6 | 31.7 | R |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 79.6 | 35.9 | 31.4 | R |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 78.6 | 31.9 | 30.5 | R |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 15 | 92 | 43.3 | 30.5 | R |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 15 | 96 | 29.4 | 25.1 | R |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 21 | 103 | 9.66 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 21.1 | 106 | 3.43 | 14.4 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 32.8 | 119 | 14.3 | 14.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 83.0 | 34.1 | 110 | 13.5 | 19.2 | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 111 | 32 | 132 | 3.67 | 29.3 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 31.3 | 112 | 17.9 | 19 | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 34.1 | 119 | 17.4 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 127 | 24.7 | 152 | 14.3 | 21.3 | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 76.5 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 87 | | 200.0 | | 43.3 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 63 | | 100.0 | | 62.9 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 65 | | 100.0 | | 64.7 | 15 | 166 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209F93**RcptNo: **1**Received By: **Juan Rojas**

9/29/2022 7:30:00 AM

*Juan Rojas*Completed By: **Cheyenne Cason**

9/29/2022 7:59:55 AM

Cheyenne Cason

Reviewed By:

*MPG 9-29-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

14 7
(<2 or >12 unless noted)

Adjusted? *yes*Checked by: *see 9/29/22**see 9/29/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: *added ~0.4mL HNO₃ to CO₂, OOC₂E for dissolved metals analysis, checked for proper pH <2 see 9/29/22*

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.3 | Good | Yes | | | |
| 2 | 0.3 | Good | Yes | | | |
| 3 | 0.2 | Good | Yes | | | |

see 9/29/22



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 19, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209H02

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/30/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209H02
Date: 10/19/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|--------------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: RAA | | | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/5/2022 10:03:53 PM | GW915 |
| Surr: BFB | 92.9 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:03:53 PM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | Analyst: CCM | | | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Acetone | 5.4 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Xylenes, Total | 0.46 | 0.37 | 1.5 | J | µg/L | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Surr: Dibromofluoromethane | 99.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 5:48:00 PM | R91600 |
| Surr: Toluene-d8 | 95.7 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 5:48:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 8:21:40 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.045 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 5:16:58 PM | 70521 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 5:16:58 PM | 70521 |
| Surr: DNOP | 90.9 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 5:16:58 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: 2-Fluorophenol | 51.7 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: Phenol-d5 | 38.5 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 71.5 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: Nitrobenzene-d5 | 58.7 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 58.1 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 78.8 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 8:09:57 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 6:13:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.7 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 57.5 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 6:13:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 73.6 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 6:13:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Chromium | 0.0025 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 11:24:30 AM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:13:32 PM | 70537 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:06:14 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:13:32 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:13:32 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:02:05 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:00:00 AM

Lab ID: 2209H02-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| Zinc | 0.0072 | 0.0032 | 0.010 | J | mg/L | 1 | 10/4/2022 5:23:17 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:11:30 PM | A91522 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:11:30 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:11:30 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:11:30 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:08:30 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/5/2022 10:27:19 PM | GW915 |
| Surr: BFB | 91.8 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 10:27:19 PM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Acetone | 3.3 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 97.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 98.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Surr: Dibromofluoromethane | 97.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 6:11:00 PM | R91600 |
| Surr: Toluene-d8 | 94.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 6:11:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 10/4/2022 8:51:47 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.017 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 5:40:38 PM | 70521 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 5:40:38 PM | 70521 |
| Surr: DNOP | 88.0 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 5:40:38 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: 2-Fluorophenol | 52.3 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: Phenol-d5 | 38.6 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 72.6 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: Nitrobenzene-d5 | 61.8 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 57.1 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 83.0 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 8:52:06 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 6:59:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.9 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 53.3 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 6:59:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 68.6 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 6:59:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.013 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Chromium | 0.0029 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| Zinc | 0.0047 | 0.0039 | 0.010 | J | mg/L | 1 | 10/4/2022 11:29:06 AM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:15:59 PM | 70537 |
| Arsenic | 0.0013 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:08:41 PM | 70537 |
| Lead | 0.00073 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:15:59 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:15:59 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:10:39 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 8:30:00 AM

Lab ID: 2209H02-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.013 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| Zinc | 0.096 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:34:13 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:14:11 PM | A91522 |
| Arsenic | 0.0014 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:14:11 PM | A91522 |
| Lead | 0.00013 | 0.000057 | 0.00050 | J | mg/L | 1 | 10/4/2022 12:14:11 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:14:11 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:12:48 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/5/2022 11:37:45 PM | GW915 |
| Surr: BFB | 95.4 | 0 | 70-130 | | %Rec | 1 | 10/5/2022 11:37:45 PM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Acetone | 3.7 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Surr: Dibromofluoromethane | 97.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:20:00 PM | R91600 |
| Surr: Toluene-d8 | 95.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:20:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 9:22:00 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 6:04:16 PM | 70521 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 6:04:16 PM | 70521 |
| Surr: DNOP | 87.6 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 6:04:16 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: 2-Fluorophenol | 55.4 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: Phenol-d5 | 42.0 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 73.8 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: Nitrobenzene-d5 | 62.0 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 60.4 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 81.7 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 9:34:02 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 7:45:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.9 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 60.0 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 7:45:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 74.2 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 7:45:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|---------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.023 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Chromium | 0.0040 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Cobalt | 0.072 | 0.0035 | 0.0060 | | mg/L | 1 | 10/10/2022 4:10:59 PM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Vanadium | 0.060 | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:39:39 AM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/10/2022 4:10:59 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:18:25 PM | 70537 |
| Arsenic | 0.0030 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:11:07 PM | 70537 |
| Lead | 0.00036 | 0.00019 | 0.00050 | J | mg/L | 1 | 10/6/2022 3:18:25 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:18:25 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.00045 | 0.0010 | | mg/L | 5 | 10/6/2022 1:23:39 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:00:00 AM

Lab ID: 2209H02-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.016 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Cobalt | 0.028 | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Vanadium | 0.046 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| Zinc | 0.055 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:38:15 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:16:53 PM | A91522 |
| Arsenic | 0.0029 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:16:53 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:16:53 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:16:53 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:21:22 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:20:00 AM

Lab ID: 2209H02-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/6/2022 12:01:10 AM | GW915 |
| Surr: BFB | 93.9 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:01:10 AM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 99.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 98.1 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Surr: Dibromofluoromethane | 99.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:42:00 PM | R91600 |
| Surr: Toluene-d8 | 93.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 7:42:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209H02-004B

Client Sample ID: MW-2

Collection Date: 9/29/2022 9:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 9:52:05 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:20:00 AM

Lab ID: 2209H02-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.038 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 6:27:54 PM | 70521 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 6:27:54 PM | 70521 |
| Surr: DNOP | 90.1 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 6:27:54 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: 2-Fluorophenol | 49.2 | 0 | 15-84.5 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: Phenol-d5 | 37.5 | 0 | 15-67 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 67.4 | 0 | 15-108 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: Nitrobenzene-d5 | 55.7 | 0 | 16.8-112 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 54.2 | 0 | 15-101 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 84.2 | 0 | 34.4-134 | | %Rec | 1 | 10/12/2022 10:15:53 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 8:30:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:20:00 AM

Lab ID: 2209H02-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 66.8 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 54.8 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 8:30:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 72.7 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 8:30:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:20:00 AM

Lab ID: 2209H02-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.021 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Chromium | 0.0050 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 11:44:19 AM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:20:52 PM | 70537 |
| Arsenic | 0.0010 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:13:34 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:20:52 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:20:52 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:23:31 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:20:00 AM

Lab ID: 2209H02-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.019 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| Zinc | 0.037 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:42:16 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:19:34 PM | A91522 |
| Arsenic | 0.0010 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:19:34 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:19:34 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:19:34 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:25:39 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/6/2022 12:24:34 AM | GW915 |
| Surr: BFB | 94.9 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:24:34 AM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 98.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:05:00 PM | R91600 |
| Surr: Toluene-d8 | 93.7 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:05:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/4/2022 10:22:14 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 1.1 | 0.016 | 0.064 | | mg/L | 1 | 10/3/2022 6:51:36 PM | 70521 |
| Motor Oil Range Organics (MRO) | 0.50 | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 6:51:36 PM | 70521 |
| Surr: DNOP | 92.1 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 6:51:36 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: 2-Fluorophenol | 58.8 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: Phenol-d5 | 43.6 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 70.3 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: Nitrobenzene-d5 | 70.0 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 65.6 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 88.8 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 2:52:59 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/4/2022 9:16:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 77.4 | 0 | 15-108 | | %Rec | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 67.5 | 0 | 15-107 | | %Rec | 1 | 10/4/2022 9:16:00 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 79.1 | 0 | 15-166 | | %Rec | 1 | 10/4/2022 9:16:00 PM | 70536 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
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Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.060 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 11:48:48 AM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:23:18 PM | 70537 |
| Arsenic | 0.00097 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/5/2022 4:16:01 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:23:18 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 3:23:18 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:27:48 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-5

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.017 | 0.0056 | 0.010 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Beryllium | ND | 0.0044 | 0.010 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Nickel | ND | 0.016 | 0.050 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Vanadium | ND | 0.0086 | 0.25 | | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| Zinc | 0.029 | 0.016 | 0.050 | J | mg/L | 5 | 10/4/2022 5:48:19 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:22:15 PM | A91522 |
| Arsenic | 0.00086 | 0.00012 | 0.0010 | J | mg/L | 1 | 10/4/2022 12:22:15 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:22:15 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:22:15 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:36:21 PM | 70627 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/6/2022 12:48:00 AM | GW915 |
| Surr: BFB | 93.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 12:48:00 AM | GW915 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Surr: Dibromofluoromethane | 98.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:28:00 PM | R91600 |
| Surr: Toluene-d8 | 95.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:28:00 PM | R91600 |

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|-------------|-----|--|----|---|
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 11:22:33 PM | 70550 |

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| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | J | mg/L | 1 | 10/3/2022 7:15:18 PM | 70521 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/3/2022 7:15:18 PM | 70521 |
| Surr: DNOP | 94.6 | 0 | 42.2-138 | | %Rec | 1 | 10/3/2022 7:15:18 PM | 70521 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: 2-Fluorophenol | 30.7 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: Phenol-d5 | 23.1 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: 2,4,6-Tribromophenol | 37.3 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: Nitrobenzene-d5 | 39.1 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: 2-Fluorobiphenyl | 36.5 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| Surr: 4-Terphenyl-d14 | 58.5 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 3:34:58 PM | 70536 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 10:23:00 AM | 70536 |

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Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 47.7 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Surr: 2-Fluorobiphenyl | 38.5 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 10:23:00 AM | 70536 |
| Surr: 4-Terphenyl-d14 | 57.0 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 10:23:00 AM | 70536 |

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Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.013 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Chromium | 0.0033 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 11:53:10 AM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:30:40 PM | 70537 |
| Arsenic | 0.0015 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:18:27 PM | 70537 |
| Lead | 0.00066 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:30:40 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/10/2022 3:42:30 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:38:30 PM | 70627 |

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022

Lab ID: 2209H02-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.013 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| Zinc | 0.029 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 5:50:18 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:24:57 PM | A91522 |
| Arsenic | 0.0013 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:24:57 PM | A91522 |
| Lead | 0.00012 | 0.000057 | 0.00050 | J | mg/L | 1 | 10/4/2022 12:24:57 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:24:57 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:40:40 PM | 70627 |

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Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-29-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/29/2022 9:40:00 AM

Lab ID: 2209H02-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 97.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:51:00 PM | R91600 |
| Surr: Toluene-d8 | 94.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 8:51:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209H02-008A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Acetone | 3.2 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 99.7 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Surr: Dibromofluoromethane | 99.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:14:00 PM | R91600 |
| Surr: Toluene-d8 | 94.5 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:14:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H02

Date Reported: 10/19/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209H02-008B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/4/2022 11:52:35 PM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |



ANALYTICAL REPORT

October 07, 2022

Hall Environmental Analysis Laboratory

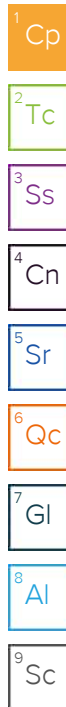
Sample Delivery Group: L1542753

Samples Received: 10/04/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109



Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2209H02-001F EB-09-29-22 L1542753-01 | 5 | |
| 2209H02-002F MW-1 L1542753-02 | 6 | ⁴ Cn |
| 2209H02-003F SMW-4 L1542753-03 | 7 | ⁵ Sr |
| 2209H02-004F MW-2 L1542753-04 | 8 | |
| 2209H02-005F MW-5 L1542753-05 | 9 | ⁶ Qc |
| 2209H02-006F DUP-9-29-22 L1542753-06 | 10 | |
| Qc: Quality Control Summary | 11 | ⁷ Gl |
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| Gl: Glossary of Terms | 13 | |
| Al: Accreditations & Locations | 14 | ⁹ Sc |
| Sc: Sample Chain of Custody | 15 | |

2209H02-001F EB-09-29-22 L1542753-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:44 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2209H02-002F MW-1 L1542753-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:45 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H02-003F SMW-4 L1542753-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:46 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H02-004F MW-2 L1542753-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:47 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H02-005F MW-5 L1542753-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:48 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H02-006F DUP-9-29-22 L1542753-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:49 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:44 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/29/22 08:30

L1542753

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:45 | WG1937600 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:46 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/29/22 09:20

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:47 | WG1937600 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:48 | WG1937600 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:49 | WG1937600 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3845870-1 10/07/22 12:16

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1542733-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1542733-01 10/07/22 12:22 • (DUP) R3845870-3 10/07/22 12:23

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1542734-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1542734-02 10/07/22 12:30 • (DUP) R3845870-6 10/07/22 12:31

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3845870-2 10/07/22 12:17

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0985 | 98.5 | 87.1-120 | |

L1542733-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542733-02 10/07/22 12:24 • (MS) R3845870-4 10/07/22 12:25 • (MSD) R3845870-5 10/07/22 12:26

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0880 | 0.0881 | 88.0 | 88.1 | 1 | 90.0-110 | J6 | J6 | 0.114 | 20 |

Sample Narrative:

MS: Matrix spike failure due to matrix interference.
MSD: Matrix spike failure due to matrix interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1542742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542742-01 10/07/22 12:32 • (MS) R3845870-7 10/07/22 12:33 • (MSD) R3845870-8 10/07/22 12:34

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0957 | 0.0953 | 93.7 | 93.3 | 1 | 90.0-110 | | | 0.419 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

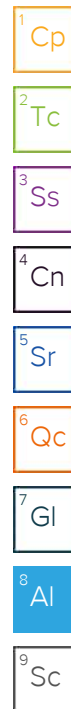
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

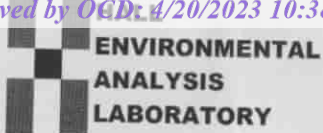
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

1042

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|-------------------------|
| 1 | 2209H02-001F | EB-09-29-22 | 500AMBHDP | Groundw | 9/29/2022 8:00:00 AM | 1 | Total Cyanide J and MDL |
| 2 | 2209H02-002F | MW-1 | 500AMBHDP | Groundw | 9/29/2022 8:30:00 AM | 1 | Total Cyanide J and MDL |
| 3 | 2209H02-003F | SMW-4 | 500AMBHDP | Groundw | 9/29/2022 9:00:00 AM | 1 | Total Cyanide J and MDL |
| 4 | 2209H02-004F | MW-2 | 500AMBHDP | Groundw | 9/29/2022 9:20:00 AM | 1 | Total Cyanide J and MDL |
| 5 | 2209H02-005F | MW-5 | 500AMBHDP | Groundw | 9/29/2022 9:40:00 AM | 1 | Total Cyanide J and MDL |
| 6 | 2209H02-006F | DUP-9-29-22 | 500AMBHDP | Groundw | 9/29/2022 | 1 | Total Cyanide J and MDL |

Handwritten notes: 712 PLV, 11842753, -91, -02, -03, -04, -09, -06

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|------------------------|----------------------|---------------------------------|----------------------|-------------------|--|--|
| Relinquished By: | Date: 9/30/2022 | Time: 8:17 AM | Received By: <i>[Signature]</i> | Date: 10/4/22 | Time: 0900 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples 3.0 °C Attempt to Cool? ☐ | |
| Comments: | | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70537 | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 70537 | | RunNo: 91525 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278251 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0055 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70537 | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 70537 | | RunNo: 91525 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278252 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.6 | 50 | 150 | | | J |
| Chromium | 0.0091 | 0.0060 | 0.006000 | 0 | 152 | 50 | 150 | | | S |
| Cobalt | 0.0048 | 0.0060 | 0.006000 | 0 | 80.6 | 50 | 150 | | | J |
| Nickel | 0.0064 | 0.010 | 0.005000 | 0 | 129 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 106 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.013 | 0.010 | 0.01000 | 0 | 130 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70537 | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 70537 | | RunNo: 91525 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278253 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279594 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279595 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0013 | 0.0020 | 0.002000 | 0 | 67.2 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 123 | 50 | 150 | | | |
| Chromium | 0.0065 | 0.0060 | 0.006000 | 0 | 109 | 50 | 150 | | | |
| Cobalt | 0.0069 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0037 | 0.010 | 0.005000 | 0 | 74.7 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.2 | 50 | 150 | | | J |
| Vanadium | 0.0076 | 0.050 | 0.01000 | 0 | 75.9 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 137 | 50 | 150 | | | |

| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279596 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.0 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70537 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280686 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70537 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280687 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 99.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-70537 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280688 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.2 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.4 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 94.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91522 | RunNo: 91522 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3278154 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91522 | RunNo: 91522 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3278155 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00056 | 0.00050 | 0.0005000 | 0 | 111 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 123 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91522 | RunNo: 91522 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3278156 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.4 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.6 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-70627 | | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: PBW | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281398 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-70627 | | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281399 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00014 | 0.00020 | 0.0001500 | 0 | 95.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-70627 | | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281400 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H02-003DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: SMW-4 | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281450 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0063 | 0.00020 | 0.005000 | 0 | 126 | 75 | 125 | | | S |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H02-003DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: SMW-4 | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281451 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0062 | 0.00020 | 0.005000 | 0 | 124 | 75 | 125 | 2.06 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H02-003DMS | | SampType: MS | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: SMW-4 | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281482 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0036 | 0.0010 | 0.005000 | 0 | 72.1 | 75 | 125 | | | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H02-003DMSD | | SampType: MSD | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: SMW-4 | | Batch ID: 70627 | | RunNo: 91595 | | | | | | |
| Prep Date: 10/5/2022 | | Analysis Date: 10/6/2022 | | SeqNo: 3281483 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0037 | 0.0010 | 0.005000 | 0 | 74.7 | 75 | 125 | 3.42 | 20 | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70550 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70550 | | RunNo: 91538 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3279152 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70550 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70550 | | RunNo: 91538 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3279153 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 | 0.1000 | 0 | 117 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70550 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70550 | | RunNo: 91538 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3279154 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 99.8 | 70 | 130 | 16.0 | 20 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70550 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70550 | | RunNo: 91538 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3279176 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70521 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70521 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277549 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.019 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.030 | | 0.03750 | | 80.5 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70521 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70521 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277550 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 56.2 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.017 | | 0.01875 | | 91.3 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70521 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70521 | | RunNo: 91480 | | | | | | | |
| Prep Date: 9/30/2022 | Analysis Date: 10/3/2022 | | SeqNo: 3277551 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 66.5 | 31.7 | 75.4 | 16.8 | 20 | |
| Surr: DNOP | 0.016 | | 0.01875 | | 87.1 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.25ug gro lcsII | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: GW91584 | | RunNo: 91584 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280846 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 95.3 | 80 | 120 | | | |
| Surr: BFB | 39 | | 20.00 | | 193 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209h02-002a ms | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MW-1 | Batch ID: GW91584 | | RunNo: 91584 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280849 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 91.8 | 70 | 130 | | | |
| Surr: BFB | 38 | | 20.00 | | 192 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2209h02-002a msd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MW-1 | Batch ID: GW91584 | | RunNo: 91584 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280850 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 92.4 | 70 | 130 | 0.651 | 20 | |
| Surr: BFB | 39 | | 20.00 | | 193 | 70 | 130 | 0 | 0 | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mbII | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: GW91584 | | RunNo: 91584 | | | | | | | |
| Prep Date: | Analysis Date: 10/5/2022 | | SeqNo: 3280856 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 91.6 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3281749 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.3 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 89.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282580 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282580 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 97.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209H02-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MW-1 | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282583 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 93.4 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 97.0 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 85.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 89.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2209H02-002amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: MW-1 | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282584 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.6 | 70 | 130 | 3.46 | 20 | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.9 | 70 | 130 | 0.883 | 20 | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | 1.89 | 20 | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 86.4 | 70 | 130 | 1.39 | 20 | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 92.0 | 70 | 130 | 2.44 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.1 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.6 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.5 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 94.5 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70536 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70536 | RunNo: 91758 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | SeqNo: 3289568 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 59.9 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 88 | | 200.0 | | 44.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 69.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 71.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 65.8 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 85.7 | 34.4 | 134 | | | |

| Sample ID: LCS-70536 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70536 | RunNo: 91758 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | SeqNo: 3289569 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| Sample ID: LCS-70536 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289569 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 70 | 10 | 100.0 | 0 | 69.5 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 51 | 5.0 | 100.0 | 0 | 50.6 | 15 | 89.8 | | | |
| Phenol | 98 | 20 | 200.0 | 0 | 48.8 | 17 | 61.1 | | | |
| Pyrene | 83 | 10 | 100.0 | 0 | 83.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 120 | | 200.0 | | 60.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 90 | | 200.0 | | 45.1 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 79.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 66.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 91.8 | 34.4 | 134 | | | |

| Sample ID: LCSD-70536 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 70536 | | RunNo: 91758 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/12/2022 | | SeqNo: 3289570 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 63.4 | 21.3 | 104 | 9.13 | 45.3 | |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 44.0 | 15 | 89.8 | 14.0 | 39.6 | |
| Phenol | 89 | 20 | 200.0 | 0 | 44.4 | 17 | 61.1 | 9.52 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 79.2 | 61 | 123 | 5.22 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 57.3 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.4 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 75.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 64.6 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 93.9 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-70536 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 70536 | RunNo: 91528 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | SeqNo: 3278417 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 82 | | 100.0 | | 82.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 86 | | 200.0 | | 42.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 68 | | 100.0 | | 68.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 78 | | 100.0 | | 77.5 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70536 LF | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 70536 | RunNo: 91528 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | SeqNo: 3278418 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.50 | 0.30 | 2.000 | 0 | 25.0 | 15 | 60.5 | | | |
| Naphthalene | 0.92 | 0.30 | 2.000 | 0 | 46.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.6 | | | |
| Acenaphthene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 15 | 92 | | | |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 15 | 96 | | | |
| Phenanthrene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.1 | 0.30 | 2.000 | 0 | 105 | 32.8 | 119 | | | |
| Pyrene | 1.9 | 1.0 | 2.000 | 0 | 95.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 107 | 32 | 132 | | | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 110 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 49 | | 100.0 | | 48.7 | 15 | 108 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H02

19-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: LCS-70536 LF | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70536 | | | RunNo: 91528 | | | | | |
| Prep Date: 10/3/2022 | | Analysis Date: 10/4/2022 | | | SeqNo: 3278418 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 79 | | 200.0 | | 39.3 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 44 | | 100.0 | | 43.6 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 55 | | 100.0 | | 54.5 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70536 LF | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70536 | | RunNo: 91528 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278419 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.88 | 0.30 | 2.000 | 0 | 44.0 | 15 | 60.5 | 55.1 | 29.7 | R |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 15 | 78.3 | 38.6 | 31.7 | R |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 79.6 | 35.9 | 31.4 | R |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 15 | 78.6 | 31.9 | 30.5 | R |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 15 | 92 | 43.3 | 30.5 | R |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 15 | 96 | 29.4 | 25.1 | R |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 21 | 103 | 9.66 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 21.1 | 106 | 3.43 | 14.4 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 32.8 | 119 | 14.3 | 14.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 83.0 | 34.1 | 110 | 13.5 | 19.2 | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 111 | 32 | 132 | 3.67 | 29.3 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 31.3 | 112 | 17.9 | 19 | |
| Benzo(b)fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 100 | 34.1 | 119 | 17.4 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 127 | 24.7 | 152 | 14.3 | 21.3 | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 76.5 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 87 | | 200.0 | | 43.3 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 63 | | 100.0 | | 62.9 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 65 | | 100.0 | | 64.7 | 15 | 166 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209H02**

RcptNo: 1

Received By: **Juan Rojas**

9/30/2022 7:30:00 AM

*Juan Rojas*Completed By: **Cheyenne Cason**

9/30/2022 8:10:51 AM

*Cheyenne Cason*Reviewed By: **TME**

9/30/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 126
(<2 or >12 unless noted)

Adjusted? NOChecked by: 029/30/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

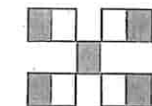
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |
| 2 | 1.7 | Good | Yes | | | |
| 3 | 0.6 | Good | Yes | | | |

| | | |
|---------------------------------|--|--|
| Chain-of-Custody Record | | Turn-Around Time: |
| Marathon Gallup Refinery | | X Standard Rush |
| | | Project Name: |
| Address: 92 Giant Crossing Road | | 2022 GW Sampling ^{Yrd} Qtr Quarter |
| Jamestown, NM, 87347 | | Project #: 697-080-001 |
| #: | | |



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

4/2026 5:09:37 PM

| | | | | | |
|---|--------|-------------|----------------------|-------------------|----------|
| Project Manager:
Lesli Alexander/Mackensie Swift | | | | | |
| Standard ☐ Level 4 (Full Validation) | | | | | |
| Validation: ☐ Az Compliance ☐ Other _____ | | | | | |
| N/A ☐ AC ☐ Other _____ | | | | | |
| ID (Type) _____ | | | | | |
| Sampler: _____ | | | | | |
| On Ice: ☒ Yes ☐ No | | | | | |
| # of Coolers: 3 | | | | | |
| Cooler Temp (including CF): See Remarks | | | | | |
| Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
| 9/29 8:00 | | EB-9-29-22 | 13 | | 2209402 |
| 9/29 8:30 | | MW-1 | 13 | | 001 |
| 9/29 9:00 | | SMW-4 | 13 | | 002 |
| 9/29 9:20 | | MW-2 | 13 | | 003 |
| 9/29 9:40 | | MW-5 | 13 | | 004 |
| 9/29 — | | Dup-9-29-22 | 13 | | 005 |
| 9/29 9:40 | | FB-9-29-22 | 3 | | 006 |
| | | Trip Blank | | | 007 |
| | | | | | 008 |

| | | | | | |
|-------|---------------------------------------|--------------------|------|------------|-------|
| Time: | Relinquished by: <i>Hilario Trigo</i> | Received by: | Via: | Date | Time |
| 9/29 | <i>[Signature]</i> | <i>[Signature]</i> | | November 9 | 12:53 |
| Time: | Relinquished by: | Received by: | Via: | Date | Time |

necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 18, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209H72

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 9/30/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209H72
Date: 10/18/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates denote that the analyte recovery was outside of the standard limits due to matrix interferences.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample OW-14.

Analytical Notes Regarding EPA Method 8270SIMS:

The LCSD had elevated recoveries for the "S" flagged compounds

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The LCS had elevated recovery. The LCSD had elevated recovery due to sample carryover.

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 7:07:00 PM | R91497 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 10/3/2022 7:07:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Acetone | 7.0 | 2.5 | 10 | J | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Xylenes, Total | 0.43 | 0.37 | 1.5 | J | µg/L | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 99.9 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 94.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:37:00 PM | R91600 |
| Surr: Toluene-d8 | 95.0 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 9:37:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 10/5/2022 12:22:44 AM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | ND | 0.016 | 0.064 | | mg/L | 1 | 10/4/2022 7:51:42 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 7:51:42 PM | 70553 |
| Surr: DNOP | 87.9 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 7:51:42 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: 2-Fluorophenol | 51.8 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: Phenol-d5 | 39.8 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 58.6 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: Nitrobenzene-d5 | 58.9 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 57.6 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 77.5 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 4:16:33 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 1:23:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 77.2 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 66.9 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 1:23:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 75.2 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 1:23:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:42:09 PM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 12:04:45 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:33:06 PM | 70537 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:20:54 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:33:06 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/10/2022 3:44:57 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:42:49 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:45:00 AM

Lab ID: 2209H72-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| Zinc | 0.0062 | 0.0032 | 0.010 | J | mg/L | 1 | 10/4/2022 6:00:52 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:27:38 PM | A91522 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:27:38 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:27:38 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:27:38 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:44:58 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 7:26:00 PM | R91497 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 10/3/2022 7:26:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 99.8 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 99.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:00:00 PM | R91600 |
| Surr: Toluene-d8 | 94.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:00:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/5/2022 12:52:45 AM | 70550 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.020 | 0.016 | 0.064 | J | mg/L | 1 | 10/4/2022 8:15:53 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 8:15:53 PM | 70553 |
| Surr: DNOP | 83.8 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 8:15:53 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: 2-Fluorophenol | 46.7 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: Phenol-d5 | 35.1 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 58.5 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: Nitrobenzene-d5 | 57.3 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 58.3 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 75.0 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 4:58:09 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 2:08:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 70.1 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 61.4 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 2:08:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 71.0 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 2:08:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.021 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Chromium | 0.0036 | 0.0020 | 0.0060 | J | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:48:29 PM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 12:09:21 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:35:33 PM | 70537 |
| Arsenic | 0.00068 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/5/2022 4:23:20 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:35:33 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/10/2022 3:47:23 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:47:07 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 7:55:00 AM

Lab ID: 2209H72-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.021 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| Zinc | 0.026 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 6:13:42 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:30:20 PM | A91522 |
| Arsenic | 0.00072 | 0.00012 | 0.0010 | J | mg/L | 1 | 10/4/2022 12:30:20 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:30:20 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:30:20 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000098 | 0.000091 | 0.00020 | J | mg/L | 1 | 10/6/2022 12:49:17 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:15:00 AM

Lab ID: 2209H72-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.11 | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 7:46:00 PM | R91497 |
| Surr: BFB | 1020 | 0 | 70-130 | S | %Rec | 1 | 10/3/2022 7:46:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | 9.3 | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | 0.21 | 0.12 | 1.0 | J | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Isopropylbenzene | 0.27 | 0.18 | 1.0 | J | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| sec-Butylbenzene | 0.20 | 0.14 | 1.0 | J | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 99.6 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 110 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Surr: Dibromofluoromethane | 98.4 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:23:00 PM | R91600 |
| Surr: Toluene-d8 | 90.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:23:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:15:00 AM

Lab ID: 2209H72-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/10/2022 1:01:01 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:15:00 AM

Lab ID: 2209H72-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.34 | 0.016 | 0.064 | | mg/L | 1 | 10/4/2022 8:40:01 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 8:40:01 PM | 70553 |
| Surr: DNOP | 88.4 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 8:40:01 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: 2-Fluorophenol | 20.1 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: Phenol-d5 | 30.8 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 10.0 | 0 | 15-108 | S | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: Nitrobenzene-d5 | 57.1 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 56.8 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 73.7 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 5:39:55 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 8.3 | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 2:54:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** SMW-2**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/30/2022 8:15:00 AM**Lab ID:** 2209H72-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 67.0 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 55.3 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 2:54:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 61.3 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 2:54:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:15:00 AM

Lab ID: 2209H72-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.026 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Chromium | 0.022 | 0.0020 | 0.0060 | | mg/L | 1 | 10/5/2022 3:50:05 PM | 70537 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Nickel | 0.042 | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Silver | 0.0057 | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:50:05 PM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 12:13:59 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/5/2022 3:50:05 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 3:37:59 PM | 70537 |
| Arsenic | 0.0019 | 0.00022 | 0.0010 | | mg/L | 1 | 10/5/2022 4:25:46 PM | 70537 |
| Lead | 0.00064 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 3:37:59 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/10/2022 3:49:50 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:51:25 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: SMW-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:15:00 AM

Lab ID: 2209H72-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.015 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Nickel | 0.041 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Silver | 0.0078 | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| Zinc | 0.020 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 6:17:43 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:33:01 PM | A91522 |
| Arsenic | 0.0021 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:33:01 PM | A91522 |
| Lead | 0.000058 | 0.000057 | 0.00050 | J | mg/L | 1 | 10/4/2022 12:33:01 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:33:01 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:53:35 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:30:00 AM

Lab ID: 2209H72-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.28 | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 8:05:00 PM | R91497 |
| Surr: BFB | 6210 | 0 | 70-130 | S | %Rec | 1 | 10/3/2022 8:05:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | 10 | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | 0.27 | 0.12 | 1.0 | J | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| sec-Butylbenzene | 0.23 | 0.14 | 1.0 | J | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.3 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Surr: Dibromofluoromethane | 99.2 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:46:00 PM | R91600 |
| Surr: Toluene-d8 | 90.0 | 0 | 70-130 | | %Rec | 1 | 10/6/2022 10:46:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209H72-004B

Client Sample ID: OW-59

Collection Date: 9/30/2022 8:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/10/2022 1:30:48 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:30:00 AM

Lab ID: 2209H72-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.39 | 0.016 | 0.064 | | mg/L | 1 | 10/4/2022 9:04:13 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 9:04:13 PM | 70553 |
| Surr: DNOP | 85.6 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 9:04:13 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: 2-Fluorophenol | 43.0 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: Phenol-d5 | 38.7 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 42.4 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: Nitrobenzene-d5 | 60.0 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 55.4 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 72.8 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 6:22:37 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 6.4 | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 3:39:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:30:00 AM

Lab ID: 2209H72-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 72.8 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 57.5 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 3:39:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 64.4 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 3:39:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:30:00 AM

Lab ID: 2209H72-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.081 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Nickel | 0.031 | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Silver | 0.0023 | 0.0018 | 0.0050 | J | mg/L | 1 | 10/5/2022 3:51:33 PM | 70537 |
| Vanadium | 0.014 | 0.0035 | 0.050 | J | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| Zinc | 0.0091 | 0.0039 | 0.010 | J | mg/L | 1 | 10/4/2022 12:25:42 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 1:33:18 PM | 70537 |
| Arsenic | 0.0048 | 0.00022 | 0.0010 | | mg/L | 1 | 10/6/2022 1:33:18 PM | 70537 |
| Lead | 0.0018 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 1:33:18 PM | 70537 |
| Selenium | 0.0015 | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 1:33:18 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 12:55:43 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:30:00 AM

Lab ID: 2209H72-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.011 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Nickel | 0.040 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Silver | 0.0048 | 0.0013 | 0.0050 | J | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Vanadium | 0.0029 | 0.0017 | 0.050 | J | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 6:28:41 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:35:42 PM | A91522 |
| Arsenic | 0.0035 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:35:42 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:35:42 PM | A91522 |
| Selenium | 0.0014 | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:35:42 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:04:14 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|---------------------|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: BRM | | |
| Gasoline Range Organics (GRO) | 53 | 0.45 | 2.5 | | mg/L | 50 | 10/3/2022 8:25:00 PM | R91497 |
| Surr: BFB | 118 | 0 | 70-130 | | %Rec | 50 | 10/3/2022 8:25:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: CCM | | |
| Benzene | 24000 | 110 | 500 | | µg/L | 500 | 10/6/2022 11:09:00 PM | R91600 |
| Toluene | ND | 10 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Ethylbenzene | 950 | 11 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Methyl tert-butyl ether (MTBE) | 480 | 20 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Isopropylbenzene | 26 | 9.1 | 50 | J | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| n-Butylbenzene | 16 | 13 | 150 | J | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| n-Propylbenzene | 57 | 9.1 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| sec-Butylbenzene | 11 | 7.2 | 50 | J | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Xylenes, Total | ND | 19 | 75 | | µg/L | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.5 | 0 | 70-130 | | %Rec | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Surr: Dibromofluoromethane | 97.1 | 0 | 70-130 | | %Rec | 50 | 10/6/2022 11:32:00 PM | R91600 |
| Surr: Toluene-d8 | 96.7 | 0 | 70-130 | | %Rec | 50 | 10/6/2022 11:32:00 PM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/10/2022 2:00:35 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 3.1 | 0.016 | 0.064 | | mg/L | 1 | 10/4/2022 9:28:24 PM | 70553 |
| Motor Oil Range Organics (MRO) | 0.17 | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 9:28:24 PM | 70553 |
| Surr: DNOP | 91.2 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 9:28:24 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 1-Methylnaphthalene | 20 | 4.3 | 5.0 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Phenol | 43 | 18 | 20 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: 2-Fluorophenol | 49.5 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: Phenol-d5 | 40.9 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 76.7 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: Nitrobenzene-d5 | 61.3 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 58.9 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 70.7 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 7:05:10 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.5 | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Naphthalene | 15 | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Acenaphthene | 0.58 | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Fluorene | 0.78 | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Phenanthrene | 0.44 | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Anthracene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 4:24:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 71.0 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 48.4 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 4:24:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 56.5 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 4:24:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.3 | 0.0079 | 0.015 | * | mg/L | 5 | 10/4/2022 12:31:26 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Cobalt | 0.0064 | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Nickel | 0.067 | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:52:56 PM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 12:30:06 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 1:35:44 PM | 70537 |
| Arsenic | 0.0028 | 0.00022 | 0.0010 | | mg/L | 1 | 10/6/2022 1:35:44 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 1:35:44 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 1:35:44 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:06:23 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 8:50:00 AM

Lab ID: 2209H72-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.3 | 0.0056 | 0.010 | * | mg/L | 5 | 10/4/2022 6:35:04 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Nickel | 0.078 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Silver | 0.0014 | 0.0013 | 0.0050 | J | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| Zinc | 0.0092 | 0.0032 | 0.010 | J | mg/L | 1 | 10/4/2022 6:33:06 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:43:48 PM | A91522 |
| Arsenic | 0.0027 | 0.00012 | 0.0010 | | mg/L | 1 | 10/4/2022 12:43:48 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:43:48 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:43:48 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:12:53 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.90 | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 8:45:00 PM | R91497 |
| Surr: BFB | 107 | 0 | 70-130 | | %Rec | 1 | 10/3/2022 8:45:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Methyl tert-butyl ether (MTBE) | 900 | 20 | 50 | | µg/L | 50 | 10/7/2022 12:18:00 AM | R91600 |
| 1,2,4-Trimethylbenzene | 0.23 | 0.12 | 1.0 | J | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Acetone | 3.2 | 2.5 | 10 | J | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| sec-Butylbenzene | 0.21 | 0.14 | 1.0 | J | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 95.8 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Surr: 4-Bromofluorobenzene | 95.4 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Surr: Dibromofluoromethane | 97.4 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 12:41:00 AM | R91600 |
| Surr: Toluene-d8 | 96.6 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 12:41:00 AM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209H72-006B

Client Sample ID: OW-30

Collection Date: 9/30/2022 9:15:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 10/10/2022 2:30:28 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 7.9 | 0.16 | 0.64 | | mg/L | 10 | 10/5/2022 4:34:43 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 10/5/2022 4:34:43 PM | 70553 |
| Surr: DNOP | 0 | 0 | 42.2-138 | S | %Rec | 10 | 10/5/2022 4:34:43 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | 8.6 | 8.4 | 10 | J | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: 2-Fluorophenol | 49.5 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: Phenol-d5 | 38.3 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 117 | 0 | 15-108 | S | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: Nitrobenzene-d5 | 52.0 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 72.9 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 7:47:46 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.72 | 0.11 | 1.0 | J | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Anthracene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 5:09:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 69.4 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 54.3 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 5:09:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 59.9 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 5:09:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.15 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Cobalt | 0.0057 | 0.0035 | 0.0060 | J | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Nickel | 0.075 | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:54:09 PM | 70537 |
| Vanadium | 0.0048 | 0.0035 | 0.050 | J | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 12:34:31 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 1:38:10 PM | 70537 |
| Arsenic | 0.00092 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/6/2022 1:38:10 PM | 70537 |
| Lead | 0.0018 | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 1:38:10 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 1:38:10 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:15:02 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.13 | 0.0011 | 0.0020 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Cobalt | 0.0025 | 0.0024 | 0.0060 | J | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Nickel | 0.081 | 0.0033 | 0.010 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 10/4/2022 6:37:02 PM | C91551 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:46:30 PM | A91522 |
| Arsenic | 0.00076 | 0.00012 | 0.0010 | J | mg/L | 1 | 10/4/2022 12:46:30 PM | A91522 |
| Lead | 0.00044 | 0.000057 | 0.00050 | J | mg/L | 1 | 10/4/2022 12:46:30 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:46:30 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:17:11 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 10/3/2022 9:04:00 PM | R91497 |
| Surr: BFB | 108 | 0 | 70-130 | | %Rec | 1 | 10/3/2022 9:04:00 PM | R91497 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Surr: 4-Bromofluorobenzene | 98.5 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 1:50:00 AM | R91600 |
| Surr: Toluene-d8 | 94.5 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 1:50:00 AM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 10/10/2022 3:00:14 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: mb | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | J | mg/L | 1 | 10/4/2022 11:05:05 PM | 70553 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 10/4/2022 11:05:05 PM | 70553 |
| Surr: DNOP | 89.7 | 0 | 42.2-138 | | %Rec | 1 | 10/4/2022 11:05:05 PM | 70553 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: 2-Fluorophenol | 56.7 | 0 | 15-84.5 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: Phenol-d5 | 40.5 | 0 | 15-67 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: 2,4,6-Tribromophenol | 80.6 | 0 | 15-108 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 16.8-112 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 61.6 | 0 | 15-101 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 79.6 | 0 | 34.4-134 | | %Rec | 1 | 10/13/2022 8:30:15 PM | 70583 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 10/5/2022 5:55:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|--------------------|-----|--|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. |
| | D | Sample Diluted Due to Matrix |
| | H | Holding times for preparation or analysis exceeded |
| | ND | Not Detected at the Reporting Limit |
| | PQL | Practical Quantitative Limit |
| | S | % Recovery outside of range due to dilution or matrix interference |

| | |
|----|---|
| B | Analyte detected in the associated Method Blank |
| E | Estimated value |
| J | Analyte detected below quantitation limits |
| P | Sample pH Not In Range |
| RL | Reporting Limit |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 71.7 | 0 | 15-108 | | %Rec | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Surr: 2-Fluorobiphenyl | 57.0 | 0 | 15-107 | | %Rec | 1 | 10/5/2022 5:55:00 PM | 70583 |
| Surr: 4-Terphenyl-d14 | 65.5 | 0 | 15-166 | | %Rec | 1 | 10/5/2022 5:55:00 PM | 70583 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.021 | 0.0016 | 0.0030 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 10/5/2022 3:55:46 PM | 70537 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 10/4/2022 12:45:10 PM | 70537 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/6/2022 1:40:36 PM | 70537 |
| Arsenic | 0.00078 | 0.00022 | 0.0010 | J | mg/L | 1 | 10/6/2022 1:40:36 PM | 70537 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 10/6/2022 1:40:36 PM | 70537 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 10/6/2022 1:40:36 PM | 70537 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:19:20 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022

Lab ID: 2209H72-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.018 | 0.0011 | 0.0020 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| Zinc | 0.056 | 0.0032 | 0.010 | | mg/L | 1 | 10/6/2022 12:34:09 PM | A91612 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 10/4/2022 12:54:33 PM | A91522 |
| Arsenic | 0.00073 | 0.00012 | 0.0010 | J | mg/L | 1 | 10/4/2022 12:54:33 PM | A91522 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 10/4/2022 12:54:33 PM | A91522 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 10/4/2022 12:54:33 PM | A91522 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 10/6/2022 1:21:30 PM | 70628 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-9-30-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/30/2022 9:15:00 AM

Lab ID: 2209H72-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Xylenes, Total | 0.47 | 0.37 | 1.5 | J | µg/L | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Surr: Dibromofluoromethane | 99.0 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:36:00 AM | R91600 |
| Surr: Toluene-d8 | 94.9 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:36:00 AM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209H72-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Xylenes, Total | 0.47 | 0.37 | 1.5 | J | µg/L | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Surr: 1,2-Dichloroethane-d4 | 98.9 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Surr: Dibromofluoromethane | 98.8 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:59:00 AM | R91600 |
| Surr: Toluene-d8 | 94.5 | 0 | 70-130 | | %Rec | 1 | 10/7/2022 2:59:00 AM | R91600 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209H72

Date Reported: 10/18/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209H72-009B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 10/10/2022 3:30:17 PM | 70551 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

October 09, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1542742

Samples Received: 10/04/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2209H72-001F EB-09-28-22 L1542742-01 | 5 | |
| 2209H72-002F BW-1C L1542742-02 | 6 | <div><div>4</div>Cn</div> |
| 2209H72-003F BW-2C L1542742-03 | 7 | <div><div>5</div>Sr</div> |
| 2209H72-004F BW-2B L1542742-04 | 8 | |
| 2209H72-005F BW-3C L1542742-05 | 9 | <div><div>6</div>Qc</div> |
| 2209H72-006F BW-3B L1542742-06 | 10 | |
| 2209H72-007F DUP-9-28-22 L1542742-07 | 11 | <div><div>7</div>Gl</div> |
| Qc: Quality Control Summary | 12 | <div><div>8</div>Al</div> |
| Wet Chemistry by Method 4500CN E-2016 | 12 | |
| Gl: Glossary of Terms | 16 | <div><div>9</div>Sc</div> |
| Al: Accreditations & Locations | 17 | |
| Sc: Sample Chain of Custody | 18 | |

2209H72-001F EB-09-28-22 L1542742-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:32 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2209H72-002F BW-1C L1542742-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:35 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H72-003F BW-2C L1542742-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:36 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H72-004F BW-2B L1542742-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:37 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H72-005F BW-3C L1542742-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937600 | 1 | 10/06/22 03:18 | 10/07/22 12:38 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H72-006F BW-3B L1542742-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937792 | 1 | 10/07/22 08:19 | 10/07/22 19:33 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209H72-007F DUP-9-28-22 L1542742-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1937792 | 1 | 10/07/22 08:19 | 10/07/22 19:34 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:32 | WG1937600 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:35 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0284 | | 0.00500 | 1 | 10/07/2022 12:36 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0189 | | 0.00500 | 1 | 10/07/2022 12:37 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 12:38 | WG1937600 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00714 | | 0.00500 | 1 | 10/07/2022 19:33 | WG1937792 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 10/07/2022 19:34 | WG1937792 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3845870-1 10/07/22 12:16

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1542733-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1542733-01 10/07/22 12:22 • (DUP) R3845870-3 10/07/22 12:23

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1542734-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1542734-02 10/07/22 12:30 • (DUP) R3845870-6 10/07/22 12:31

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3845870-2 10/07/22 12:17

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0985 | 98.5 | 87.1-120 | |

L1542733-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542733-02 10/07/22 12:24 • (MS) R3845870-4 10/07/22 12:25 • (MSD) R3845870-5 10/07/22 12:26

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0880 | 0.0881 | 88.0 | 88.1 | 1 | 90.0-110 | J6 | J6 | 0.114 | 20 |

Sample Narrative:

- MS: Matrix spike failure due to matrix interference.
- MSD: Matrix spike failure due to matrix interference.

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Wet Chemistry by Method 4500CN E-2016

[L1542742-01,02,03,04,05](#)

L1542742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542742-01 10/07/22 12:32 • (MS) R3845870-7 10/07/22 12:33 • (MSD) R3845870-8 10/07/22 12:34

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0957 | 0.0953 | 93.7 | 93.3 | 1 | 90.0-110 | | | 0.419 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3846129-1 10/07/22 19:07

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1542514-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1542514-04 10/07/22 19:14 • (DUP) R3846129-3 10/07/22 19:15

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1542514-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1542514-05 10/07/22 19:16 • (DUP) R3846129-4 10/07/22 19:17

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3846129-2 10/07/22 19:08

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.103 | 103 | 87.1-120 | |

L1542514-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542514-06 10/07/22 19:20 • (MS) R3846129-5 10/07/22 19:21 • (MSD) R3846129-6 10/07/22 19:22

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00699 | 0.102 | 0.0965 | 95.0 | 89.5 | 1 | 90.0-110 | | J6 | 5.54 | 20 |

Sample Narrative:

MSD: Matrix spike failure due to matrix interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1542514-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542514-07 10/07/22 19:23 • (MS) R3846129-7 10/07/22 19:24 • (MSD) R3846129-8 10/07/22 19:25

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|---------------------|----------------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0943 | 0.0963 | 94.3 | 96.3 | 1 | 90.0-110 | | | 2.10 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

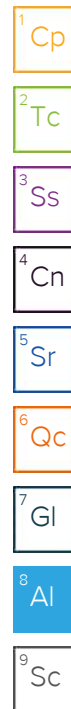
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

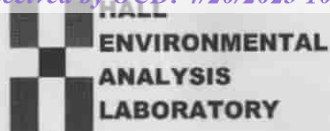
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

1050

| | | | | | | | |
|---|--------------|-------------------------|-------------|------------------------------|----------------------|----------------------------|-----------------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2209H72-001F | EB-09-28-22 | 500AMBHDP | Groundw | 9/30/2022 7:45:00 AM | 1 | Total Cyanide J and MDL <i>01</i> |
| 2 | 2209H72-002F | BW-1C | 500AMBHDP | Groundw | 9/30/2022 7:55:00 AM | 1 | Total Cyanide J and MDL <i>02</i> |
| 3 | 2209H72-003F | BW-2C | 500AMBHDP | Groundw | 9/30/2022 8:15:00 AM | 1 | Total Cyanide J and MDL <i>03</i> |
| 4 | 2209H72-004F | BW-2B | 500AMBHDP | Groundw | 9/30/2022 8:30:00 AM | 1 | Total Cyanide J and MDL <i>04</i> |
| 5 | 2209H72-005F | BW-3C | 500AMBHDP | Groundw | 9/30/2022 8:50:00 AM | 1 | Total Cyanide J and MDL <i>05</i> |
| 6 | 2209H72-006F | BW-3B | 500AMBHDP | Groundw | 9/30/2022 9:15:00 AM | 1 | Total Cyanide J and MDL <i>06</i> |
| 7 | 2209H72-007F | DUP-9-28-22 | 500AMBHDP | Groundw | 9/30/2022 | 1 | Total Cyanide J and MDL <i>07</i> |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|------------------------|----------------------|---------------------------------|----------------------|--------------------|--|--|
| Relinquished By: <i>See</i> | Date: 9/30/2022 | Time: 2:45 PM | Received By: <i>[Signature]</i> | Date: 10/4/22 | Time: 09:00 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples 1.6 °C Attempt to Cool ? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70537 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70537 | RunNo: 91525 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | SeqNo: 3278251 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0055 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70537 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70537 | RunNo: 91525 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | SeqNo: 3278252 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 105 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.6 | 50 | 150 | | | J |
| Chromium | 0.0091 | 0.0060 | 0.006000 | 0 | 152 | 50 | 150 | | | S |
| Cobalt | 0.0048 | 0.0060 | 0.006000 | 0 | 80.6 | 50 | 150 | | | J |
| Nickel | 0.0064 | 0.010 | 0.005000 | 0 | 129 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 106 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.013 | 0.010 | 0.01000 | 0 | 130 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70537 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70537 | RunNo: 91525 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | SeqNo: 3278253 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279594 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279595 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0013 | 0.0020 | 0.002000 | 0 | 67.2 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 123 | 50 | 150 | | | |
| Chromium | 0.0065 | 0.0060 | 0.006000 | 0 | 109 | 50 | 150 | | | |
| Cobalt | 0.0069 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0037 | 0.010 | 0.005000 | 0 | 74.7 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 97.2 | 50 | 150 | | | J |
| Vanadium | 0.0076 | 0.050 | 0.01000 | 0 | 75.9 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 137 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91551 | RunNo: 91551 | | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | SeqNo: 3279596 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.0 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H72-001EMS | | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-9-30-22 | | Batch ID: C91551 | | RunNo: 91551 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3279730 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.3 | 70 | 130 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.4 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.3 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.4 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 70 | 130 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.1 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.006210 | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H72-001EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: EB-9-30-22 | | Batch ID: C91551 | | RunNo: 91551 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3279731 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.7 | 70 | 130 | 1.70 | 20 | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 70 | 130 | 1.42 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.5 | 70 | 130 | 2.02 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | 2.19 | 20 | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 70 | 130 | 2.50 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.3 | 70 | 130 | 2.04 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | 2.98 | 20 | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0 | 96.0 | 70 | 130 | 2.14 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006210 | 97.8 | 70 | 130 | 2.96 | 20 | |

| | | | | | | | | | | |
|-----------------|--------|--------------------------|-----------|-------------|--|----------|-------------|------|----------|------|
| Sample ID: MB-A | | SampType: MBLK | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: A91612 | | | RunNo: 91612 | | | | | |
| Prep Date: | | Analysis Date: 10/6/2022 | | | SeqNo: 3282797 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A91612 | | RunNo: 91612 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282798 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 92.5 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 100 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Chromium | 0.0065 | 0.0060 | 0.006000 | 0 | 109 | 50 | 150 | | | |
| Cobalt | 0.0047 | 0.0060 | 0.006000 | 0 | 78.0 | 50 | 150 | | | J |
| Nickel | 0.0058 | 0.010 | 0.005000 | 0 | 116 | 50 | 150 | | | J |
| Silver | 0.0040 | 0.0050 | 0.005000 | 0 | 80.9 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 100 | 50 | 150 | | | J |
| Zinc | 0.0093 | 0.010 | 0.01000 | 0 | 92.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A91612 | | RunNo: 91612 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282799 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0020 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Beryllium | 0.48 | 0.0020 | 0.5000 | 0 | 95.2 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.5 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.9 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.4 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0 | 97.0 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70537 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280686 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70537 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280687 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 103 | 50 | 150 | | | |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 99.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-70537 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70537 | RunNo: 91575 | | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/5/2022 | SeqNo: 3280688 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.7 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.2 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.4 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 94.5 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A91522 | | RunNo: 91522 | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | | SeqNo: 3278154 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A91522 | | RunNo: 91522 | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | | SeqNo: 3278155 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00056 | 0.00050 | 0.0005000 | 0 | 111 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 123 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A91522 | | RunNo: 91522 | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | | SeqNo: 3278156 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 95.4 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.6 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209H72-006EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: OW-30 | Batch ID: A91522 | | RunNo: 91522 | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | | SeqNo: 3278192 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.028 | 0.0010 | 0.02500 | 0 | 112 | 70 | 130 | | | |
| Arsenic | 0.028 | 0.0010 | 0.02500 | 0.0007565 | 108 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0004408 | 89.1 | 70 | 130 | | | |
| Selenium | 0.030 | 0.0010 | 0.02500 | 0 | 121 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209H72-007EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: DUP-9-30-22 | Batch ID: A91522 | | RunNo: 91522 | | | | | | | |
| Prep Date: | Analysis Date: 10/4/2022 | | SeqNo: 3278195 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209H72-007EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: DUP-9-30-22 | | Batch ID: A91522 | | RunNo: 91522 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3278195 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.9 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0007284 | 102 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 86.1 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 110 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2209H72-006EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: OW-30 | | Batch ID: A91522 | | RunNo: 91522 | | | | | | |
| Prep Date: | | Analysis Date: 10/4/2022 | | SeqNo: 3278197 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | 3.41 | 20 | |
| Arsenic | 0.028 | 0.0010 | 0.02500 | 0.0007565 | 108 | 70 | 130 | 0.526 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0004408 | 90.2 | 70 | 130 | 1.19 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 17.6 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70628 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 70628 | RunNo: 91595 | | | | | | | | |
| Prep Date: 10/5/2022 | Analysis Date: 10/6/2022 | SeqNo: 3281401 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70628 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70628 | RunNo: 91595 | | | | | | | | |
| Prep Date: 10/5/2022 | Analysis Date: 10/6/2022 | SeqNo: 3281402 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00013 | 0.00020 | 0.0001500 | 0 | 89.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70628 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 70628 | RunNo: 91595 | | | | | | | | |
| Prep Date: 10/5/2022 | Analysis Date: 10/6/2022 | SeqNo: 3281403 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209H72-005DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-14 | Batch ID: 70628 | RunNo: 91595 | | | | | | | | |
| Prep Date: 10/5/2022 | Analysis Date: 10/6/2022 | SeqNo: 3281472 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0044 | 0.00020 | 0.005000 | 0 | 89.0 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209H72-005DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: OW-14 | Batch ID: 70628 | RunNo: 91595 | | | | | | | | |
| Prep Date: 10/5/2022 | Analysis Date: 10/6/2022 | SeqNo: 3281473 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0043 | 0.00020 | 0.005000 | 0 | 86.4 | 75 | 125 | 2.92 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70550 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279152 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-70550 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279153 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 117 70 130 |

| | | |
|-----------------------|--------------------------|--|
| Sample ID: LCSD-70550 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279154 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 99.8 70 130 16.0 20 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2209H72-002BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: MW-4 | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/5/2022 | SeqNo: 3279155 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.075 | 0.0094 0.09383 0 79.8 65 135 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70550 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70550 | RunNo: 91538 |
| Prep Date: 10/4/2022 | Analysis Date: 10/4/2022 | SeqNo: 3279176 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-70551 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70551 | RunNo: 91697 |
| Prep Date: 10/10/2022 | Analysis Date: 10/10/2022 | SeqNo: 3286136 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70551 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70551 | | RunNo: 91697 | | | | | | | |
| Prep Date: 10/10/2022 | Analysis Date: 10/10/2022 | | SeqNo: 3286137 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 97.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|--------|----------|------|
| Sample ID: LCSD-70551 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70551 | | RunNo: 91697 | | | | | | | |
| Prep Date: 10/10/2022 | Analysis Date: 10/10/2022 | | SeqNo: 3286138 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 97.6 | 70 | 130 | 0.0543 | 20 | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70551 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70551 | | RunNo: 91697 | | | | | | | |
| Prep Date: 10/10/2022 | Analysis Date: 10/10/2022 | | SeqNo: 3286155 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70553 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70553 | | RunNo: 91533 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278987 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.045 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.029 | | 0.03750 | | 77.7 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70553 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70553 | | RunNo: 91533 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278988 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 88.5 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.016 | | 0.01875 | | 82.9 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70553 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70553 | | RunNo: 91533 | | | | | | | |
| Prep Date: 10/3/2022 | Analysis Date: 10/4/2022 | | SeqNo: 3278989 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 1.0 | 0.064 | 0.1875 | 0 | 537 | 31.7 | 75.4 | 143 | 20 | RS |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.7 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R91497 | | RunNo: 91497 | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | | SeqNo: 3277236 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0 | 97.4 | 80 | 120 | | | |
| Surr: BFB | 46 | | 20.00 | | 229 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R91497 | | RunNo: 91497 | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | | SeqNo: 3277237 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209h72-002a ms | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MW-4 | Batch ID: R91497 | | RunNo: 91497 | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | | SeqNo: 3277245 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 95.8 | 70 | 130 | | | |
| Surr: BFB | 43 | | 20.00 | | 217 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209H72-002A MSD | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MW-4 | Batch ID: R91497 | | RunNo: 91497 | | | | | | | |
| Prep Date: | Analysis Date: 10/3/2022 | | SeqNo: 3277246 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.44 | 0.050 | 0.5000 | 0 | 87.7 | 70 | 130 | 8.85 | 20 | |
| Surr: BFB | 43 | | 20.00 | | 215 | 70 | 130 | 0 | 0 | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3281749 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.3 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 89.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282580 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91600 | | RunNo: 91600 | | | | | | | |
| Prep Date: | Analysis Date: 10/6/2022 | | SeqNo: 3282580 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 97.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.8 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70583 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70583 | | | RunNo: 91785 | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/13/2022 | | | SeqNo: 3291295 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 39 | | 200.0 | | 19.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 57 | | 200.0 | | 28.7 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 38 | | 200.0 | | 19.0 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 57.6 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 54.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 73.0 | 34.4 | 134 | | | |

| Sample ID: LCS-70583 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70583 | | | RunNo: 91785 | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/13/2022 | | | SeqNo: 3291296 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70583 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70583 | | RunNo: 91785 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/13/2022 | | SeqNo: 3291296 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 67 | 10 | 100.0 | 0 | 67.2 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 49 | 5.0 | 100.0 | 0 | 48.7 | 15 | 89.8 | | | |
| Phenol | 87 | 20 | 200.0 | 0 | 43.3 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 75.2 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.0 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 82 | | 200.0 | | 41.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 72.9 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.7 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 64.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 86.5 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70583 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70583 | | RunNo: 91785 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/13/2022 | | SeqNo: 3291297 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 62 | 10 | 100.0 | 0 | 62.1 | 21.3 | 104 | 7.87 | 45.3 | |
| 1,4-Dichlorobenzene | 46 | 5.0 | 100.0 | 0 | 46.2 | 15 | 89.8 | 5.27 | 39.6 | |
| Phenol | 85 | 20 | 200.0 | 0 | 42.5 | 17 | 61.1 | 1.79 | 42.5 | |
| Pyrene | 73 | 10 | 100.0 | 0 | 72.8 | 61 | 123 | 3.22 | 11.8 | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 50.6 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 80 | | 200.0 | | 39.8 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 66.5 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.5 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 58.5 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 87 | | 100.0 | | 86.9 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70583 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70583 | | RunNo: 91615 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/5/2022 | | SeqNo: 3282374 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.0 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 38 | | 200.0 | | 19.0 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 55 | | 100.0 | | 55.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 70 | | 100.0 | | 69.9 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70583 LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70583 | | RunNo: 91615 | | | | | | | |
| Prep Date: 10/4/2022 | Analysis Date: 10/5/2022 | | SeqNo: 3282375 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.98 | 1.0 | 2.000 | 0 | 49.0 | 15 | 60.5 | | | J |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 15 | 92 | | | |
| Fluorene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 15 | 96 | | | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 21 | 103 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 86.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 32.8 | 119 | | | |
| Pyrene | 1.6 | 1.0 | 2.000 | 0 | 80.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 100 | 32 | 132 | | | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 85 | | 100.0 | | 85.2 | 15 | 108 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209H72

18-Oct-22

Client: Marathon

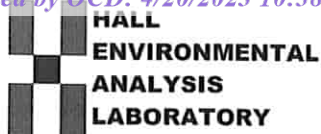
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: LCS-70583 LF | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70583 | | | RunNo: 91615 | | | | | |
| Prep Date: 10/4/2022 | | Analysis Date: 10/5/2022 | | | SeqNo: 3282375 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 72 | | 100.0 | | 71.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 70 | | 100.0 | | 69.8 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-70583 LF | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | | Batch ID: 70583 | | RunNo: 91615 | | | | | | |
| Prep Date: 10/4/2022 | | Analysis Date: 10/5/2022 | | SeqNo: 3282376 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 1.2 | 1.0 | 2.000 | 0 | 58.0 | 15 | 60.5 | 16.8 | 29.7 | |
| Naphthalene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 15 | 78.3 | 16.8 | 31.7 | S |
| 1-Methylnaphthalene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 15 | 79.6 | 17.9 | 31.4 | S |
| 2-Methylnaphthalene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 15 | 78.6 | 16.6 | 30.5 | S |
| Acenaphthene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 15 | 92 | 18.0 | 30.5 | |
| Fluorene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 15 | 96 | 18.2 | 25.1 | S |
| Phenanthrene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 21 | 103 | 19.2 | 26.4 | |
| Anthracene | 2.1 | 0.30 | 2.000 | 0 | 103 | 21.1 | 106 | 18.0 | 14.4 | R |
| Fluoranthene | 2.2 | 0.30 | 2.000 | 0 | 111 | 32.8 | 119 | 18.7 | 14.8 | R |
| Pyrene | 1.9 | 1.0 | 2.000 | 0 | 97.0 | 34.1 | 110 | 19.2 | 19.2 | R |
| Benz(a)anthracene | 2.4 | 0.30 | 2.000 | 0 | 121 | 32 | 132 | 19.0 | 29.3 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 31.3 | 112 | 18.6 | 19 | |
| Benzo(b)fluoranthene | 2.2 | 0.30 | 2.000 | 0 | 111 | 34.1 | 119 | 19.8 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 124 | 24.7 | 152 | 22.4 | 21.3 | R |
| Surr: Nitrobenzene-d5 | 85 | | 100.0 | | 85.0 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 91 | | 200.0 | | 45.4 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 71 | | 100.0 | | 71.4 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 70 | | 100.0 | | 70.5 | 15 | 166 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209H72

RcptNo: 1

Received By: Kasandra Payan 9/30/2022 2:35:00 PM

Completed By: Sean Livingston 9/30/2022 2:41:40 PM

Reviewed By:

KPA 9-30-22

KH
Sean Livingston

Chain of Custody1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐2. How was the sample delivered? CourierLog In3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐Samples were collected the same day and chilled.5. Sample(s) in proper container(s)? Yes ☒ No ☐6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐ See 9/30/228. Was preservative added to bottles? Yes ☒ No ☒ NA ☐9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐10. Were any sample containers received broken? Yes ☐ No ☒11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐13. Is it clear what analyses were requested? Yes ☒ No ☐14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved bottles checked for pH: 14 7
(<2 or >12 unless noted)

Adjusted? yesChecked by: See 9/20/22Special Handling (if applicable)15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail☐ Phone☐ Fax☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: added ~0.4mL HNO_3 to samples 003E, 006E, +007E for dissolved metal analysis, and ~0.5mL HNO_3 to 003D, 005D for total

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 8.1 | Good | | | | |
| 2 | 5.6 | Good | | | | |
| 3 | 9.1 | Good | | | | |
| 4 | 6.2 | Good | | | | |

metals analysis, checked for proper pH <2

See 9/30/22

Samples 004F + 006F did NOT pH

Released to Imaging: 8/14/2026 5:09:31 PM

DD (Type)

Relinquished by:

14:35

$$9.1 - 0 = 9.1$$

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Oil or Fax#: | | Level 4 (Full Validation) | | Project Manager: | |
|---------------|------|---|--|---------------------------------|-----|
| AZOC Package: | | ☐ Level 4 (Full Validation)
☐ Az Compliance
☐ Other | | Lesli Alexander/Mackensie Swift | |
| Standard | | ☐ On Ice: ☒ Yes ☐ No
☐ ELAC
☐ Other | | Sampler: | |
| EDD (Type) | | # of Coolers: 4 | | Cooler Temp (including CF): | |
| Time | | Matrix | | Sample Name | |
| 9/30 | 7:45 | | | 13 | 001 |
| 9/30 | 7:55 | | | 13 | 002 |
| 9/30 | 8:15 | | | 13 | 003 |
| 9/30 | 8:30 | | | 13 | 004 |
| 9/30 | 8:50 | | | 13 | 005 |
| 9/30 | 9:15 | | | 13 | 006 |
| 9/30 | 9:15 | | | 13 | 007 |
| 9/30 | 9:15 | | | 3 | 008 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 3 | | 2209H72 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 3 | | 2209H72 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 3 | | 2209H72 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 3 | | 2209H72 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type | HEAL No. |
|----------------------|-------------------|----------|
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 13 | | 2209H72 |
| 3 | | 2209H72 |

Time: 9/30

Relinquished by: Hilaria T-y

Received by: [Signature]

Date: 9/30/22

Time: 9/30

Relinquished by: [Signature]

Received by: [Signature]

Date: 9/30/22

Project Manager: Lesli Alexander/Mackensie Swift

Sampler: [Signature]

On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (including CF):

| Container Type and # | Preservative Type |
|----------------------|-------------------|
|----------------------|-------------------|



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209349

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 12 sample(s) on 9/8/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued October 03, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209349
Date: 10/4/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates denote that the surrogate recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample OW-55.

Naphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample OW-66.

Analytical Notes Regarding EPA Method 8015DRO:

The LCS/LCSD had slightly elevated recoveries.

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 12:27:00 PM | R90998 |
| Surr: BFB | 109 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 12:27:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Acetone | 18 | 2.5 | 10 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 2-Butanone | 22 | 2.0 | 10 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Surr: Dibromofluoromethane | 112 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:07:30 AM | R91002 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:07:30 AM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 9/13/2022 5:23:42 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.64 | 0.016 | 0.064 | | mg/L | 1 | 9/9/2022 4:51:15 PM | 70050 |
| Motor Oil Range Organics (MRO) | 0.91 | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 4:51:15 PM | 70050 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 4:51:15 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: 2-Fluorophenol | 52.8 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: Phenol-d5 | 40.9 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 55.3 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: Nitrobenzene-d5 | 60.9 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 59.4 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 76.6 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 3:12:22 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 11:19:00 AM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 58.9 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Surr: 2-Fluorobiphenyl | 57.7 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 11:19:00 AM | 70053 |
| Surr: 4-Terphenyl-d14 | 78.9 | 0 | 72.3-147 | | %Rec | 1 | 9/12/2022 11:19:00 AM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| Zinc | 0.0062 | 0.0039 | 0.010 | J | mg/L | 1 | 9/9/2022 3:02:49 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:00:34 PM | 70055 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/12/2022 1:00:34 PM | 70055 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/12/2022 1:00:34 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:00:34 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:29:12 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Chromium | 0.0025 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| Zinc | 0.0046 | 0.0032 | 0.010 | J | mg/L | 1 | 9/15/2022 5:05:17 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 1:44:09 PM | A91030 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 1:44:09 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 1:44:09 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 1:44:09 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:31:18 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:00:00 AM

Lab ID: 2209349-001F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:28:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.055 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 12:47:00 PM | R90998 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 12:47:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Methyl tert-butyl ether (MTBE) | 56 | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:36:05 AM | R91002 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 11:36:05 AM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 9/13/2022 5:38:49 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.065 | 0.016 | 0.064 | | mg/L | 1 | 9/9/2022 5:14:58 PM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 5:14:58 PM | 70050 |
| Surr: DNOP | 63.2 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 5:14:58 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: 2-Fluorophenol | 45.0 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: Phenol-d5 | 35.2 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 53.9 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: Nitrobenzene-d5 | 58.0 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 57.6 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 75.6 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 3:54:27 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 12:03:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 54.9 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 54.3 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 12:03:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 74.8 | 0 | 72.3-147 | | %Rec | 1 | 9/12/2022 12:03:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.047 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:17:52 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:03:01 PM | 70055 |
| Arsenic | 0.0020 | 0.00013 | 0.0010 | | mg/L | 1 | 9/12/2022 1:03:01 PM | 70055 |
| Lead | 0.000078 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/12/2022 1:03:01 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:03:01 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:33:24 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 8:30:00 AM

Lab ID: 2209349-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.052 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| Zinc | 0.044 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:09:33 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 1:52:14 PM | A91030 |
| Arsenic | 0.0018 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 1:52:14 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 1:52:14 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 1:52:14 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:35:29 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-50**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/7/2022 8:30:00 AM**Lab ID:** 2209349-002F**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 2.30 | 1.80 | 5.00 | J | ug/L | 1 | 9/16/2022 12:30:00 PM | R91489 |

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| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
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| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 1:06:00 PM | R90998 |
| Surr: BFB | 110 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:06:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 4.1 | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Surr: Dibromofluoromethane | 118 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:01:48 PM | R91002 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:01:48 PM | R91002 |

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| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
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| | S | % Recovery outside of range due to dilution or matrix interference | | |
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Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/13/2022 5:54:01 PM | 70123 |

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| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
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Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.029 | 0.016 | 0.064 | J | mg/L | 1 | 9/9/2022 5:38:46 PM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 5:38:46 PM | 70050 |
| Surr: DNOP | 95.6 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 5:38:46 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: 2-Fluorophenol | 48.2 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: Phenol-d5 | 37.4 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 62.5 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: Nitrobenzene-d5 | 65.7 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 65.5 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 83.2 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 4:36:16 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 12:46:00 PM | 70053 |

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Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-52**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/7/2022 9:00:00 AM**Lab ID:** 2209349-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 61.6 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 60.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 12:46:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 76.9 | 0 | 72.3-147 | | %Rec | 1 | 9/12/2022 12:46:00 PM | 70053 |

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Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.038 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Chromium | 0.0020 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:21:13 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:05:27 PM | 70055 |
| Arsenic | 0.00078 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/12/2022 1:05:27 PM | 70055 |
| Lead | 0.00045 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/12/2022 1:05:27 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:05:27 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:41:47 AM | 70231 |

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Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.029 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:28:18 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 1:57:38 PM | A91030 |
| Arsenic | 0.00061 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 1:57:38 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 1:57:38 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 1:57:38 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:43:55 AM | 70231 |

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| | | | | |
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Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 9:00:00 AM

Lab ID: 2209349-003F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:35:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 2.6 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 1:26:00 PM | R90998 |
| Surr: BFB | 117 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:26:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 3100 | 39 | 100 | | µg/L | 100 | 9/14/2022 12:29:52 PM | R91045 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 1,2-Dichloroethane (EDC) | 0.56 | 0.25 | 1.0 | J | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 98.0 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:30:23 PM | R91002 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:30:23 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/13/2022 6:09:12 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.44 | 0.016 | 0.064 | | mg/L | 1 | 9/9/2022 6:02:34 PM | 70050 |
| Motor Oil Range Organics (MRO) | 0.068 | 0.052 | 0.080 | J | mg/L | 1 | 9/9/2022 6:02:34 PM | 70050 |
| Surr: DNOP | 99.7 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 6:02:34 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: 2-Fluorophenol | 38.4 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: Phenol-d5 | 29.6 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 54.1 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: Nitrobenzene-d5 | 52.9 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 50.1 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 72.4 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 5:17:59 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.82 | 0.11 | 1.0 | J | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 1:30:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 47.5 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 44.9 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 1:30:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 58.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 1:30:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.075 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Cobalt | 0.0075 | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Nickel | 0.023 | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:24:33 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:07:54 PM | 70055 |
| Arsenic | 0.00055 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/12/2022 1:07:54 PM | 70055 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/12/2022 1:07:54 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:07:54 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:46:03 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.078 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Nickel | 0.027 | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Vanadium | 0.0017 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| Zinc | 0.030 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:32:25 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:00:19 PM | A91030 |
| Arsenic | 0.00055 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:00:19 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:00:19 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 2:00:19 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:48:12 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:00:00 AM

Lab ID: 2209349-004F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 4.74 | 1.80 | 5.00 | J | ug/L | 1 | 9/16/2022 12:36:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 1.3 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 1:46:00 PM | R90998 |
| Surr: BFB | 110 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:46:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 7.6 | 1.1 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Ethylbenzene | 7.3 | 1.1 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 1200 | 20 | 50 | | µg/L | 50 | 9/13/2022 1:59:00 PM | R91002 |
| 1,2,4-Trimethylbenzene | 2.7 | 0.61 | 5.0 | J | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Surr: Dibromofluoromethane | 110 | 0 | 70-130 | | %Rec | 5 | 9/13/2022 2:27:37 PM | R91002 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 5 | 9/13/2022 2:27:37 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/13/2022 6:24:31 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.0 | 0.016 | 0.064 | | mg/L | 1 | 9/9/2022 6:26:24 PM | 70050 |
| Motor Oil Range Organics (MRO) | 0.12 | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 6:26:24 PM | 70050 |
| Surr: DNOP | 80.9 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 6:26:24 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: 2-Fluorophenol | 33.9 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: Phenol-d5 | 26.0 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 60.0 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: Nitrobenzene-d5 | 45.4 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 46.1 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 66.4 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 6:00:22 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.68 | 0.11 | 1.0 | J | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 2:14:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 43.6 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 39.4 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 2:14:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 48.7 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 2:14:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.47 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Chromium | 0.012 | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Cobalt | 0.082 | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Nickel | 0.21 | 0.0053 | 0.010 | * | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Vanadium | 0.025 | 0.0035 | 0.050 | J | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| Zinc | 0.020 | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:27:53 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:10:21 PM | 70055 |
| Arsenic | 0.011 | 0.00013 | 0.0010 | * | mg/L | 1 | 9/12/2022 1:10:21 PM | 70055 |
| Lead | 0.033 | 0.00031 | 0.0025 | * | mg/L | 5 | 9/14/2022 3:38:07 PM | 70055 |
| Selenium | 0.0017 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 3:35:41 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00022 | 0.000091 | 0.00020 | | mg/L | 1 | 9/17/2022 9:50:19 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 10:35:00 AM

Lab ID: 2209349-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.17 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Cobalt | 0.071 | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Nickel | 0.23 | 0.0033 | 0.010 | * | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| Zinc | 0.017 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:36:38 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:03:01 PM | A91030 |
| Arsenic | 0.0080 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:03:01 PM | A91030 |
| Lead | 0.010 | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:03:01 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 2:03:01 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:52:26 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-54 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/7/2022 10:35:00 AM |
| Lab ID: | 2209349-005F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 5.33 | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:37:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 170 | 0.45 | 2.5 | | mg/L | 50 | 9/13/2022 2:05:00 PM | R90998 |
| Surr: BFB | 105 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 2:05:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 27000 | 110 | 500 | | µg/L | 500 | 9/13/2022 2:56:12 PM | R91002 |
| Toluene | 31000 | 100 | 500 | | µg/L | 500 | 9/13/2022 2:56:12 PM | R91002 |
| Ethylbenzene | 1300 | 11 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 740 | 20 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,2,4-Trimethylbenzene | 1600 | 6.1 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,3,5-Trimethylbenzene | 410 | 9.1 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Isopropylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| n-Propylbenzene | 61 | 9.1 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Xylenes, Total | 13000 | 19 | 75 | | µg/L | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 94.8 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 91.1 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 3:24:49 PM | R91002 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 3:24:49 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/13/2022 6:39:43 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 7.1 | 0.080 | 0.32 | | mg/L | 5 | 9/12/2022 10:17:47 AM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.26 | 0.40 | D | mg/L | 5 | 9/12/2022 10:17:47 AM | 70050 |
| Surr: DNOP | 102 | 0 | 42.2-138 | | %Rec | 5 | 9/12/2022 10:17:47 AM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 2,4-Dimethylphenol | 16 | 5.8 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 2-Methylnaphthalene | 40 | 4.2 | 5.0 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 2-Methylphenol | 31 | 5.0 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 3+4-Methylphenol | 48 | 5.1 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Naphthalene | 160 | 3.2 | 5.0 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Phenol | 41 | 18 | 20 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | S | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: Phenol-d5 | 31.5 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 73.8 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: Nitrobenzene-d5 | 60.2 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 55.6 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 81.2 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 6:43:01 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.2 | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| 1-Methylnaphthalene | 19 | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Acenaphthene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Fluorene | 0.74 | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Phenanthrene | 1.1 | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 2:58:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 55.4 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 45.3 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 2:58:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 56.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 2:58:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.5 | 0.0079 | 0.015 | * | mg/L | 5 | 9/9/2022 3:32:30 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Chromium | 0.017 | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Cobalt | 0.0093 | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Nickel | 0.30 | 0.0053 | 0.010 | * | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Vanadium | 0.036 | 0.0035 | 0.050 | J | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| Zinc | 0.0078 | 0.0039 | 0.010 | J | mg/L | 1 | 9/9/2022 3:31:03 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:12:47 PM | 70055 |
| Arsenic | 0.0086 | 0.00013 | 0.0010 | | mg/L | 1 | 9/12/2022 1:12:47 PM | 70055 |
| Lead | 0.028 | 0.00031 | 0.0025 | * | mg/L | 5 | 9/14/2022 3:43:00 PM | 70055 |
| Selenium | 0.0023 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 3:40:34 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:54:36 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.1 | 0.0056 | 0.010 | * | mg/L | 5 | 9/15/2022 5:42:48 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Nickel | 0.33 | 0.0033 | 0.010 | * | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Vanadium | 0.0041 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:40:53 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:05:42 PM | A91030 |
| Arsenic | 0.0059 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:05:42 PM | A91030 |
| Lead | 0.00045 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/13/2022 2:05:42 PM | A91030 |
| Selenium | 0.00045 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:05:42 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:56:43 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:00:00 AM

Lab ID: 2209349-006F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 10.1 | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:38:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 20 | 0.45 | 2.5 | | mg/L | 50 | 9/13/2022 2:25:00 PM | R90998 |
| Surr: BFB | 107 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 2:25:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 6100 | 110 | 500 | | µg/L | 500 | 9/13/2022 3:53:26 PM | R91002 |
| Toluene | 190 | 10 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Ethylbenzene | 380 | 11 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 930 | 20 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,2,4-Trimethylbenzene | 170 | 6.1 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,3,5-Trimethylbenzene | 41 | 9.1 | 50 | J | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Isopropylbenzene | 19 | 9.1 | 50 | J | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| n-Propylbenzene | 41 | 9.1 | 50 | J | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Xylenes, Total | 480 | 19 | 75 | | µg/L | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 4:22:07 PM | R91002 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 50 | 9/13/2022 4:22:07 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/13/2022 6:54:56 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 4.5 | 0.080 | 0.32 | | mg/L | 5 | 9/12/2022 10:41:27 AM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.26 | 0.40 | D | mg/L | 5 | 9/12/2022 10:41:27 AM | 70050 |
| Surr: DNOP | 112 | 0 | 42.2-138 | | %Rec | 5 | 9/12/2022 10:41:27 AM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 1-Methylnaphthalene | 25 | 4.3 | 5.0 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Phenol | 33 | 18 | 20 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: 2-Fluorophenol | 47.8 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: Phenol-d5 | 36.5 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 70.9 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: Nitrobenzene-d5 | 64.8 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 62.2 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 84.1 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 7:25:41 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.3 | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Naphthalene | 19 | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| 2-Methylnaphthalene | 10 | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Acenaphthene | 0.56 | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Fluorene | 1.6 | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Phenanthrene | 1.3 | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 3:42:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 61.7 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 46.8 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 3:42:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 55.5 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 3:42:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.69 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Chromium | 0.011 | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Cobalt | 0.035 | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Nickel | 0.22 | 0.0053 | 0.010 | * | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Vanadium | 0.027 | 0.0035 | 0.050 | J | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| Zinc | 0.026 | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:39:00 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:15:14 PM | 70055 |
| Arsenic | 0.0096 | 0.00013 | 0.0010 | | mg/L | 1 | 9/12/2022 1:15:14 PM | 70055 |
| Lead | 0.0074 | 0.000061 | 0.00050 | | mg/L | 1 | 9/12/2022 1:15:14 PM | 70055 |
| Selenium | 0.0015 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 3:50:21 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 9:58:51 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:20:00 AM

Lab ID: 2209349-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.58 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Cobalt | 0.0082 | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Nickel | 0.23 | 0.0033 | 0.010 | * | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Vanadium | 0.0052 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:45:07 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:13:48 PM | A91030 |
| Arsenic | 0.0052 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:13:48 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:13:48 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:21:08 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 10:00:59 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | OW-55 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/7/2022 11:20:00 AM |
| Lab ID: | 2209349-007F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 6.38 | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:39:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|--|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Estimated value |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | PQL Practical Quantitative Limit | RL Reporting Limit |
| | S % Recovery outside of range due to dilution or matrix interference | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.10 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 2:45:00 PM | R90998 |
| Surr: BFB | 98.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 2:45:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 120 | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,2-Dichloroethane (EDC) | 0.83 | 0.25 | 1.0 | J | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:50:43 PM | R91002 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:50:43 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/13/2022 7:10:04 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.076 | 0.016 | 0.064 | | mg/L | 1 | 9/9/2022 8:25:26 PM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 8:25:26 PM | 70050 |
| Surr: DNOP | 99.3 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 8:25:26 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: 2-Fluorophenol | 42.7 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: Phenol-d5 | 32.9 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 52.7 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: Nitrobenzene-d5 | 58.5 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 56.4 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 77.6 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 8:08:24 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 4:26:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-13**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/7/2022 11:45:00 AM**Lab ID:** 2209349-008C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 56.4 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 49.8 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 4:26:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 61.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 4:26:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.019 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:41:53 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:22:35 PM | 70055 |
| Arsenic | 0.00063 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/12/2022 1:22:35 PM | 70055 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/12/2022 1:22:35 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:22:35 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:21:48 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.021 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| Zinc | 0.031 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 5:55:48 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:16:30 PM | A91030 |
| Arsenic | 0.00057 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:16:30 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:16:30 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:23:49 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:23:54 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 11:45:00 AM

Lab ID: 2209349-008F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 9/16/2022 12:40:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.27 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 3:04:00 PM | R90998 |
| Surr: BFB | 951 | 0 | 70-130 | S | %Rec | 1 | 9/13/2022 3:04:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.88 | 0.23 | 1.0 | J | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | 21 | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,2-Dichloroethane (EDC) | 9.5 | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Isopropylbenzene | 1.2 | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:19:22 PM | R91002 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:19:22 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209349-009B

Client Sample ID: OW-56

Collection Date: 9/7/2022 12:10:00 PM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/13/2022 7:25:21 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|-------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: 2-Fluorophenol | 44.5 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: Phenol-d5 | 34.3 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 58.8 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: Nitrobenzene-d5 | 59.3 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 58.6 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 76.7 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 8:50:50 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.68 | 0.11 | 1.0 | J | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Surr: Nitrobenzene-d5 | 55.9 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 49.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 5:11:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 53.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 5:11:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.41 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Chromium | 0.0049 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Cobalt | 0.0066 | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Nickel | 0.064 | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Vanadium | 0.014 | 0.0035 | 0.050 | J | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| Zinc | 0.0093 | 0.0039 | 0.010 | J | mg/L | 1 | 9/9/2022 3:45:12 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:25:02 PM | 70055 |
| Arsenic | 0.0036 | 0.00013 | 0.0010 | | mg/L | 1 | 9/12/2022 1:25:02 PM | 70055 |
| Lead | 0.0021 | 0.000061 | 0.00050 | | mg/L | 1 | 9/12/2022 1:25:02 PM | 70055 |
| Selenium | 0.00050 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/12/2022 1:25:02 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00016 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:26:02 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.36 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Nickel | 0.065 | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Vanadium | 0.0067 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:00:06 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:19:11 PM | A91030 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:19:11 PM | A91030 |
| Lead | 0.00041 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/13/2022 2:19:11 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:26:30 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00015 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:28:09 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-009F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | 3.73 | 1.80 | 5.00 | J | ug/L | 1 | 9/16/2022 12:41:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022 12:10:00 PM

Lab ID: 2209349-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 2-Butanone | 6.8 | 2.0 | 10 | J | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:47:58 PM | R91002 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:47:58 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 3:24:00 PM | R90998 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:24:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Methyl tert-butyl ether (MTBE) | 4.2 | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Surr: Dibromofluoromethane | 122 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 12:58:26 PM | R91045 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 12:58:26 PM | R91045 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | DUP-9-7-22 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/7/2022 |
| Lab ID: | 2209349-011B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/13/2022 7:55:40 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.031 | 0.016 | 0.064 | J | mg/L | 1 | 9/9/2022 8:49:13 PM | 70050 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/9/2022 8:49:13 PM | 70050 |
| Surr: DNOP | 94.1 | 0 | 42.2-138 | | %Rec | 1 | 9/9/2022 8:49:13 PM | 70050 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: 2-Fluorophenol | 47.1 | 0 | 15-84.5 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: Phenol-d5 | 37.6 | 0 | 15-67 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: 2,4,6-Tribromophenol | 59.3 | 0 | 15-108 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: Nitrobenzene-d5 | 61.3 | 0 | 16.8-112 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 59.5 | 0 | 15-101 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 87.3 | 0 | 34.4-134 | | %Rec | 1 | 9/13/2022 9:33:22 PM | 70053 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/12/2022 5:56:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 58.0 | 0 | 31.6-100 | | %Rec | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Surr: 2-Fluorobiphenyl | 52.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/12/2022 5:56:00 PM | 70053 |
| Surr: 4-Terphenyl-d14 | 67.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/12/2022 5:56:00 PM | 70053 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.036 | 0.0016 | 0.0030 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Chromium | 0.0033 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/9/2022 3:48:35 PM | 70055 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/12/2022 1:27:28 PM | 70055 |
| Arsenic | 0.00064 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/12/2022 1:27:28 PM | 70055 |
| Lead | 0.00032 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/12/2022 1:27:28 PM | 70055 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/12/2022 1:27:28 PM | 70055 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00015 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:30:16 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.032 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| Zinc | 0.025 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:04:23 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:21:52 PM | A91030 |
| Arsenic | 0.00051 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:21:52 PM | A91030 |
| Lead | 0.00013 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/13/2022 2:21:52 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:29:12 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:36:41 AM | 70231 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-7-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/7/2022

Lab ID: 2209349-011F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|------|------|------|-------|----|----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 1.80 | 5.00 | | ug/L | 1 | 9/19/2022 3:44:00 PM | R91489 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209349-012A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Surr: Dibromofluoromethane | 112 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:45:08 PM | R91002 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:45:08 PM | R91002 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209349

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209349-012B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/13/2022 8:10:52 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 19, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1534232

Samples Received: 09/09/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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SAMPLE SUMMARY

2209349-001F EB-9-7-22 L1534232-01 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:28 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2209349-002F OW-50 L1534232-02 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:30 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-003F OW-52 L1534232-03 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:35 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-004F OW-29 L1534232-04 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:36 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-005F OW-54 L1534232-05 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:37 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-006F OW-66 L1534232-06 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:38 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-007F OW-55 L1534232-07 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:39 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209349-008F OW-13 L1534232-08 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:40 | CAT | Mt. Juliet, TN |

SAMPLE SUMMARY

2209349-009F OW-56 L1534232-09 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925221 | 1 | 09/14/22 17:32 | 09/16/22 12:41 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2209349-0011F DUP-9-7-22 L1534232-10 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 15:44 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/16/2022 12:28 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|-----------|
| Cyanide | 2.30 | J J6 | 1.80 | 5.00 | 1 | 09/16/2022 12:30 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/07/22 09:00

L1534232

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/16/2022 12:35 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 4.74 | J | 1.80 | 5.00 | 1 | 09/16/2022 12:36 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 5.33 | | 1.80 | 5.00 | 1 | 09/16/2022 12:37 | WG1925221 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 09/07/22 11:00

L1534232

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 10.1 | | 1.80 | 5.00 | 1 | 09/16/2022 12:38 | WG1925221 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 09/07/22 11:20

L1534232

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 6.38 | | 1.80 | 5.00 | 1 | 09/16/2022 12:39 | WG1925221 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/16/2022 12:40 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 3.73 | J | 1.80 | 5.00 | 1 | 09/16/2022 12:41 | WG1925221 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 15:44 | WG1925290 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3838025-1 09/16/22 12:10

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| Cyanide | U | | 1.80 | 5.00 |

L1533594-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1533594-01 09/16/22 12:16 • (DUP) R3838025-3 09/16/22 12:17

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | ug/l | ug/l | | % | | % |
| Cyanide | 2.59 | U | 1 | 200 | P1 | 20 |

L1534232-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534232-01 09/16/22 12:28 • (DUP) R3838025-6 09/16/22 12:29

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| | ug/l | ug/l | | % | | % |
| Cyanide | U | U | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3838025-2 09/16/22 12:11

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| Cyanide | 100 | 96.6 | 96.6 | 87.1-120 | |

L1534230-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534230-01 09/16/22 12:25 • (MS) R3838025-4 09/16/22 12:26 • (MSD) R3838025-5 09/16/22 12:27

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Cyanide | 100 | U | 94.9 | 95.8 | 94.9 | 95.8 | 1 | 90.0-110 | | | 0.944 | 20 |

L1534232-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534232-02 09/16/22 12:30 • (MS) R3838025-7 09/16/22 12:31 • (MSD) R3838025-8 09/16/22 12:34

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Cyanide | 100 | 2.30 | 80.9 | 82.0 | 78.6 | 79.7 | 1 | 90.0-110 | J6 | J6 | 1.35 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1534232-10

Method Blank (MB)

(MB) R3838823-1 09/19/22 15:37

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1533610-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1533610-02 09/19/22 15:41 • (DUP) R3838823-3 09/19/22 15:42

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | 20 |

L1534252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534252-02 09/19/22 15:49 • (DUP) R3838823-6 09/19/22 15:50

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3838823-2 09/19/22 15:38

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 95.9 | 95.9 | 87.1-120 | |

L1534232-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534232-10 09/19/22 15:44 • (MS) R3838823-4 09/19/22 15:45 • (MSD) R3838823-5 09/19/22 15:46

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 94.7 | 94.8 | 94.7 | 94.8 | 1 | 90.0-110 | | | 0.106 | 20 |

L1535062-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535062-02 09/19/22 15:57 • (MS) R3838823-7 09/19/22 15:59 • (MSD) R3838823-8 09/19/22 16:02

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 93.6 | 91.9 | 93.6 | 91.9 | 1 | 90.0-110 | | | 1.83 | 20 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Guide to Reading and Understanding Your Laboratory Report

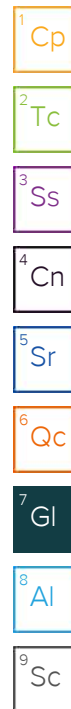
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |



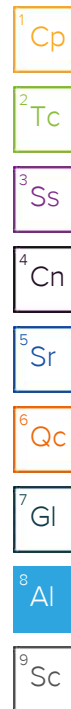
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

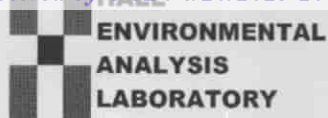
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

L-050

| | | | |
|--|------------------|-----------------------|---------------------|
| SUB CONTRACTOR: Pace TN | COMPANY: PACE TN | PHONE: (800) 767-5859 | FAX: (615) 758-5859 |
| ADDRESS: 12065 Lebanon Rd | | ACCOUNT #: | EMAIL: |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|----------------------|--------------|------------------------------|
| 1 | 2209349-001F | EB-9-7-22 | 500AMBHDP | Groundw | 9/7/2022 8:00:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2209349-002F | OW-50 | 500AMBHDP | Groundw | 9/7/2022 8:30:00 AM | 1 | Total Cyanide J and MDL - 02 |
| 3 | 2209349-003F | OW-52 | 500AMBHDP | Groundw | 9/7/2022 9:00:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2209349-004F | OW-29 | 500AMBHDP | Groundw | 9/7/2022 10:00:00 AM | 1 | Total Cyanide J and MDL - 04 |
| 5 | 2209349-005F | OW-54 | 500AMBHDP | Groundw | 9/7/2022 10:35:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2209349-006F | OW-66 | 500AMBHDP | Groundw | 9/7/2022 11:00:00 AM | 1 | Total Cyanide J and MDL - 06 |
| 7 | 2209349-007F | OW-55 | 500AMBHDP | Groundw | 9/7/2022 11:20:00 AM | 1 | Total Cyanide J and MDL - 07 |
| 8 | 2209349-008F | OW-13 | 500AMBHDP | Groundw | 9/7/2022 11:45:00 AM | 1 | Total Cyanide J and MDL - 08 |
| 9 | 2209349-009F | OW-56 | 500AMBHDP | Groundw | 9/7/2022 12:10:00 PM | 1 | Total Cyanide J and MDL - 09 |
| 10 | 2209349-011F | DUP-9-7-22 | 500AMBHDP | Groundw | 9/7/2022 | 1 | Total Cyanide J and MDL - 10 |

CONT. - 10
TB - 8

Sample Receipt Checklist

| | | |
|-------------------------|--|--|
| OC Seal Present/Intact: | ☒ Y ☐ N | If Applicable |
| OC Signed/Accurate: | ☒ Y ☐ N | VOA Zero Headspace: ☐ Y ☐ N |
| Bottles arrive intact: | ☒ Y ☐ N | Pres. Correct/Check: ☐ Y ☐ N |
| Correct bottles used: | ☒ Y ☐ N | |
| Sufficient volume sent: | ☒ Y ☐ N | |
| RAP Screen <0.5 mR/hr: | ☒ Y ☐ N | |

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|----------------|---------------|----------------------------------|----------------|-------------|--|
| Relinquished By: <i>Cme</i> | Date: 9/8/2022 | Time: 8:45 AM | Received By: <i>Agustin Soto</i> | Date: 09/09/22 | Time: 08:15 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples <i>2.9+0=2.9</i> °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-70055 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 70055 | | | RunNo: 90928 | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/9/2022 | | | SeqNo: 3251055 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0040 | 0.010 | | | | | | | | J |

| Sample ID: LCSLL-S-70055 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
|---------------------------------|--------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70055 | | | RunNo: 90928 | | | | | | |
| Prep Date: 9/8/2022 | Analysis Date: 9/9/2022 | | | SeqNo: 3251056 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0010 | 0.0030 | 0.002000 | 0 | 51.0 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.2 | 50 | 150 | | | J |
| Chromium | 0.0053 | 0.0060 | 0.006000 | 0 | 89.1 | 50 | 150 | | | J |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 113 | 50 | 150 | | | |
| Nickel | 0.0071 | 0.010 | 0.005000 | 0 | 142 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 103 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.014 | 0.010 | 0.01000 | 0 | 140 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-S-70055 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 70055 | | | RunNo: 90928 | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/9/2022 | | | SeqNo: 3251057 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.4 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 97.2 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2209349-001DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-9-7-22 | | Batch ID: 70055 | | RunNo: 90928 | | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/9/2022 | | SeqNo: 3251083 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.3 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.6 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.5 | 70 | 130 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.4 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.8 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006223 | 98.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2209349-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-9-7-22 | | Batch ID: 70055 | | RunNo: 90928 | | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/9/2022 | | SeqNo: 3251084 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 100 | 70 | 130 | 1.00 | 20 | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | 4.01 | 20 | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 0.998 | 20 | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | 2.21 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 99.0 | 70 | 130 | 1.46 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.8 | 70 | 130 | 1.49 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 70 | 130 | 0.412 | 20 | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | 4.39 | 20 | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.006223 | 99.9 | 70 | 130 | 1.70 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258295 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258297 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0015 | 0.0020 | 0.002000 | 0 | 75.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.7 | 50 | 150 | | | J |
| Chromium | 0.0073 | 0.0060 | 0.006000 | 0 | 121 | 50 | 150 | | | |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 105 | 50 | 150 | | | J |
| Silver | 0.0057 | 0.0050 | 0.005000 | 0 | 114 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 115 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 124 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258298 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 108 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 2209349-002EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: OW-50 | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258364 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0.05197 | 98.3 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.3 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.3 | 70 | 130 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.4 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Zinc | 0.54 | 0.010 | 0.5000 | 0.04435 | 100 | 70 | 130 | | | |

| Sample ID: 2209349-002EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: OW-50 | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258365 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0.05197 | 96.6 | 70 | 130 | 1.60 | 20 | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | 0.321 | 20 | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | 2.40 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | 1.46 | 20 | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.3 | 70 | 130 | 1.67 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.7 | 70 | 130 | 1.65 | 20 | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.8 | 70 | 130 | 1.65 | 20 | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 70 | 130 | 1.57 | 20 | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0.04435 | 97.1 | 70 | 130 | 2.77 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-70055 | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: 70055 | | | RunNo: 90957 | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/12/2022 | | | SeqNo: 3252707 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-70055 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70055 | | RunNo: 90957 | | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/12/2022 | | SeqNo: 3252708 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 106 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 135 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-70055 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70055 | | | RunNo: 90957 | | | | | |
| Prep Date: 9/8/2022 | | Analysis Date: 9/12/2022 | | | SeqNo: 3252721 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.5 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255541 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255542 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | |
| Selenium | 0.00088 | 0.0010 | 0.001000 | 0 | 87.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255543 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.6 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 91.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209349-001EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB-9-7-22 | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255559 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.9 | 70 | 130 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 96.6 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 93.3 | 70 | 130 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209349-001EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: EB-9-7-22 | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255560 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209349-001EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-9-7-22 | | Batch ID: A91030 | | RunNo: 91030 | | | | | | |
| Prep Date: | | Analysis Date: 9/13/2022 | | SeqNo: 3255560 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 92.1 | 70 | 130 | 1.39 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 4.58 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.0 | 70 | 130 | 1.77 | 20 | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 91.9 | 70 | 130 | 5.01 | 20 | |

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209349-002EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: OW-50 | | Batch ID: A91030 | | RunNo: 91030 | | | | | | |
| Prep Date: | | Analysis Date: 9/13/2022 | | SeqNo: 3255562 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.4 | 70 | 130 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0.001755 | 101 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.1 | 70 | 130 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 95.6 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70231 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 70231 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259047 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70231 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70231 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259048 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00017 | 0.00020 | 0.0001500 | 0 | 113 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70231 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 70231 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259049 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209349-011DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: DUP-9-7-22 | Batch ID: 70231 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259079 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0054 | 0.00020 | 0.005000 | 0.0001545 | 105 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209349-011DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: DUP-9-7-22 | Batch ID: 70231 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259080 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0051 | 0.00020 | 0.005000 | 0.0001545 | 98.4 | 75 | 125 | 6.02 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70123 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254670 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70123 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254671 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.091 | 0.010 | 0.1000 | 0 | 91.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70123 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254672 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.3 | 70 | 130 | 7.22 | 20 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70123 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254696 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70050 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 70050 | RunNo: 90940 | | | | | | | | |
| Prep Date: 9/8/2022 | Analysis Date: 9/9/2022 | SeqNo: 3251439 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.031 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 86.9 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70050 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 70050 | RunNo: 90940 | | | | | | | | |
| Prep Date: 9/8/2022 | Analysis Date: 9/9/2022 | SeqNo: 3251440 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 91.6 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 108 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70050 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70050 | RunNo: 90940 | | | | | | | | |
| Prep Date: 9/8/2022 | Analysis Date: 9/9/2022 | SeqNo: 3251441 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.16 | 0.064 | 0.1875 | 0 | 84.5 | 31.7 | 75.4 | 8.04 | 20 | S |
| Surr: DNOP | 0.018 | | 0.01875 | | 98.5 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R90998 | | RunNo: 90998 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254363 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.6 | 80 | 120 | | | |
| Surr: BFB | 45 | | 20.00 | | 223 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R90998 | | RunNo: 90998 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254366 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 105 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91002 | | RunNo: 91002 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254499 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 93.5 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 93.5 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 97.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 84.8 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 88.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 112 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209349-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-50 | Batch ID: R91002 | | RunNo: 91002 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254503 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 97.6 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.6 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 99.2 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 99.0 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 117 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209349-002amsd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-50 | Batch ID: R91002 | | RunNo: 91002 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254504 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 90.1 | 70 | 130 | 8.00 | 20 | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 88.7 | 70 | 130 | 7.48 | 20 | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 91.8 | 70 | 130 | 7.77 | 20 | |
| 1,1-Dichloroethene | 16 | 1.0 | 20.00 | 0 | 80.0 | 70 | 130 | 12.4 | 20 | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 85.5 | 70 | 130 | 8.25 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 94.7 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 111 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91002 | | | RunNo: 91002 | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | | SeqNo: 3254527 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R91045 | | | RunNo: 91045 | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | | SeqNo: 3256206 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: R91045 | | | RunNo: 91045 | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | | SeqNo: 3256206 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.4 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.6 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 99.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 90.0 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 91.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R91045 | | | RunNo: 91045 | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | | SeqNo: 3256210 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R91045 | | | RunNo: 91045 | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | | SeqNo: 3256210 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 116 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70053 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70053 | | | RunNo: 91001 | | | | | | |
| Prep Date: 9/9/2022 | Analysis Date: 9/13/2022 | | | SeqNo: 3254483 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 89 | | 200.0 | | 44.7 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 96 | | 200.0 | | 47.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 59.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 54.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 83 | | 100.0 | | 83.2 | 34.4 | 134 | | | |

| Sample ID: lcs-70053 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70053 | | | RunNo: 91001 | | | | | | |
| Prep Date: 9/9/2022 | Analysis Date: 9/13/2022 | | | SeqNo: 3254484 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: Ics-70053 | | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
| Client ID: LCSW | | Batch ID: 70053 | | | RunNo: 91001 | | | | | |
| Prep Date: 9/9/2022 | | Analysis Date: 9/13/2022 | | | SeqNo: 3254484 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 57 | 10 | 100.0 | 0 | 57.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 53 | 5.0 | 100.0 | 0 | 52.7 | 15 | 89.8 | | | |
| Phenol | 76 | 20 | 200.0 | 0 | 37.9 | 17 | 61.1 | | | |
| Pyrene | 79 | 10 | 100.0 | 0 | 78.7 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 84 | | 200.0 | | 42.0 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 67 | | 200.0 | | 33.5 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 99 | | 200.0 | | 49.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 57.8 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 54.2 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 83 | | 100.0 | | 82.5 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------|---------------------------------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: lcsd-70053 | | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | |
| Client ID: LCSS02 | | Batch ID: 70053 | | | RunNo: 91001 | | | | | |
| Prep Date: 9/9/2022 | | Analysis Date: 9/13/2022 | | | SeqNo: 3254485 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 58 | 10 | 100.0 | 0 | 57.8 | 21.3 | 104 | 1.48 | 45.3 | |
| 1,4-Dichlorobenzene | 55 | 5.0 | 100.0 | 0 | 55.1 | 15 | 89.8 | 4.39 | 39.6 | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.6 | 17 | 61.1 | 1.72 | 42.5 | |
| Pyrene | 92 | 10 | 100.0 | 0 | 92.1 | 61 | 123 | 15.7 | 11.8 | R |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.7 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 34.8 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 61.6 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 60 | | 100.0 | | 59.9 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.2 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.8 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70053 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70053 | | RunNo: 90964 | | | | | | | |
| Prep Date: 9/9/2022 | Analysis Date: 9/12/2022 | | SeqNo: 3253020 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 50 | | 100.0 | | 49.9 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 57 | | 200.0 | | 28.4 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 48.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 71 | | 100.0 | | 71.4 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70053-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70053 | | RunNo: 90964 | | | | | | | |
| Prep Date: 9/9/2022 | Analysis Date: 9/12/2022 | | SeqNo: 3253021 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.58 | 0.10 | 2.000 | 0 | 29.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.56 | 0.30 | 2.000 | 0 | 28.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.52 | 0.30 | 2.000 | 0 | 26.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.50 | 0.30 | 2.000 | 0 | 25.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 0.66 | 0.30 | 2.000 | 0 | 33.0 | 29.8 | 82.7 | | | |
| Fluorene | 0.82 | 0.30 | 2.000 | 0 | 41.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 52.9 | 123 | | | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 67.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 51 | 147 | | | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.0 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209349

04-Oct-22

Client: Marathon

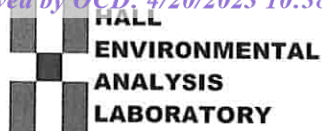
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70053-If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70053 | | | RunNo: 90964 | | | | | |
| Prep Date: 9/9/2022 | | Analysis Date: 9/12/2022 | | | SeqNo: 3253021 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 73 | | 200.0 | | 36.5 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 52.9 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 70 | | 100.0 | | 70.2 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: Icsd-70053-If | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | | Batch ID: 70053 | | | RunNo: 90964 | | | | | |
| Prep Date: 9/9/2022 | | Analysis Date: 9/12/2022 | | | SeqNo: 3253022 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.74 | 0.10 | 2.000 | 0 | 37.0 | 20.2 | 48.4 | 24.2 | 30.1 | |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 21.3 | 79.9 | 63.4 | 25.6 | R |
| 1-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 22.2 | 80.3 | 64.9 | 25 | R |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 20.6 | 80.1 | 68.4 | 25 | R |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 29.8 | 82.7 | 51.7 | 27.8 | R |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 33.3 | 86 | 32.7 | 26.4 | R |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 38.2 | 93.9 | 12.4 | 27.9 | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 41.1 | 95.6 | 9.01 | 25.6 | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 52.9 | 123 | 1.63 | 22.8 | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 67.0 | 51 | 113 | 0 | 20 | |
| Benz(a)anthracene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 51 | 147 | 0 | 24.1 | |
| Chrysene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 55.3 | 115 | 1.48 | 20 | |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 44.4 | 136 | 2.99 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 31.4 | 165 | 1.46 | 21.1 | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 76 | | 200.0 | | 38.0 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 100.0 | | 65.3 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 68 | | 100.0 | | 68.2 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209349**

RcptNo: 1

Received By: **Joseph Alderette** 9/8/2022 7:35:00 AMCompleted By: **Cheyenne Cason** 9/8/2022 8:31:04 AMReviewed By: **TMC** 9/8/22Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 20 in 9/8/22
10/10
(<2 or >12 unless noted)

Adjusted? yesChecked by: in 9/8/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

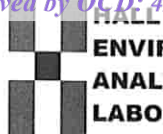
Regarding: _____

Client Instructions: _____

16. Additional remarks: 0.5ml of HNO₃ was added to sample 006D for pH < 2. in 9/8/22.

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.3 | Good | Yes | | | |
| 2 | 0.3 | Good | Yes | | | |
| 3 | 0.9 | Good | Yes | | | |
| 4 | 2.9 | Good | Yes | | | |

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check ListClient Name: **Marathon**Work Order Number: **2209349**

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 1.3 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 07, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209441

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/9/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209441
Date: 10/7/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates denote that the surrogate recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270SIMS:

The recovery for chrysene was low in the LCS/LCSD. This compound is reported in both the 8270SIM method and the standard 8270 method and is nondetect.

The recovery for 1,4-Dioxane was low in the LCSD.

Analytical Notes Regarding EPA Method 8270:

The "S" flagged surrogates for samples "East LDU" and "West LDU" were low due to the emulsive nature of the sample.

Analytical Notes Regarding EPA Method 8015DRO:

The LCS/LCSD had elevated recoveries.

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 3:44:00 PM | R90998 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:44:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Acetone | 8.3 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 90.4 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:05:00 PM | R90977 |
| Surr: Toluene-d8 | 89.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:05:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/13/2022 9:41:57 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.058 | 0.016 | 0.064 | JE | mg/L | 1 | 9/13/2022 6:50:32 PM | 70105 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 6:50:32 PM | 70105 |
| Surr: DNOP | 90.7 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 6:50:32 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: 2-Fluorophenol | 43.5 | 0 | 15-84.5 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: Phenol-d5 | 32.9 | 0 | 15-67 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 46.3 | 0 | 15-108 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: Nitrobenzene-d5 | 57.5 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 55.6 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 74.9 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 2:19:46 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 53.8 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 49.0 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 12:46:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 62.3 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 12:46:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:02:27 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:00:07 PM | 70092 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:00:07 PM | 70092 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:00:07 PM | 70092 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:00:07 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:38:50 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-08-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 8:35:00 AM

Lab ID: 2209441-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| Zinc | 0.0067 | 0.0032 | 0.010 | J | mg/L | 1 | 9/15/2022 6:08:33 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:24:33 PM | A91030 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:24:33 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:24:33 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:31:52 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:40:57 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 4:04:00 PM | R90998 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:04:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Acetone | 7.9 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 89.0 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:28:00 PM | R90977 |
| Surr: Toluene-d8 | 91.2 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 1:28:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 9/13/2022 9:57:08 PM | 70123 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.058 | 0.016 | 0.064 | JE | mg/L | 1 | 9/13/2022 7:14:11 PM | 70105 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 7:14:11 PM | 70105 |
| Surr: DNOP | 105 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 7:14:11 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: 2-Fluorophenol | 42.3 | 0 | 15-84.5 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: Phenol-d5 | 34.1 | 0 | 15-67 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 24.6 | 0 | 15-108 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: Nitrobenzene-d5 | 62.1 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 54.8 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 75.0 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 3:01:31 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 54.8 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 51.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 1:30:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 63.6 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 1:30:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.010 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Silver | 0.0019 | 0.0018 | 0.0050 | J | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| Zinc | 0.0087 | 0.0039 | 0.010 | J | mg/L | 1 | 9/13/2022 12:05:47 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:02:34 PM | 70092 |
| Arsenic | 0.0038 | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:02:34 PM | 70092 |
| Lead | 0.000070 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/14/2022 4:02:34 PM | 70092 |
| Selenium | 0.00077 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/14/2022 4:02:34 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:47:19 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:10:00 AM

Lab ID: 2209441-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.011 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Silver | 0.0058 | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Vanadium | 0.0024 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| Zinc | 0.021 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:12:51 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:27:15 PM | A91030 |
| Arsenic | 0.00013 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:27:15 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:27:15 PM | A91030 |
| Selenium | 0.0010 | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:34:34 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:49:27 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:40:00 AM

Lab ID: 2209441-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 4:23:00 PM | R90998 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:23:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Acetone | 9.9 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 90.1 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 2:37:00 PM | R90977 |
| Surr: Toluene-d8 | 88.5 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 2:37:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | PW-4 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/8/2022 9:40:00 AM |
| Lab ID: | 2209441-003B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 1:39:10 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:40:00 AM

Lab ID: 2209441-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.049 | 0.016 | 0.064 | JE | mg/L | 1 | 9/13/2022 7:37:55 PM | 70105 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 7:37:55 PM | 70105 |
| Surr: DNOP | 92.7 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 7:37:55 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: 2-Fluorophenol | 45.1 | 0 | 15-84.5 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: Phenol-d5 | 33.9 | 0 | 15-67 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 51.3 | 0 | 15-108 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: Nitrobenzene-d5 | 58.8 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 57.0 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 74.8 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 3:43:20 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:40:00 AM

Lab ID: 2209441-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 54.2 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 51.4 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 2:14:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 65.7 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 2:14:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:40:00 AM

Lab ID: 2209441-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.013 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Cobalt | 0.010 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:09:08 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:05:00 PM | 70092 |
| Arsenic | 0.0028 | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:05:00 PM | 70092 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:05:00 PM | 70092 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:05:00 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:51:35 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-4

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 9:40:00 AM

Lab ID: 2209441-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.012 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Silver | 0.0037 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Vanadium | 0.0024 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| Zinc | 0.042 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:23:46 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:29:56 PM | A91030 |
| Arsenic | 0.0013 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:29:56 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:29:56 PM | A91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:37:15 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:53:43 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EAST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:05:00 AM

Lab ID: 2209441-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.35 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 4:43:00 PM | R90998 |
| Surr: BFB | 166 | 0 | 70-130 | S | %Rec | 1 | 9/13/2022 4:43:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 17 | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Toluene | 4.4 | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Ethylbenzene | 5.4 | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | 0.94 | 0.39 | 1.0 | J | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | 5.9 | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | 9.0 | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Acetone | 56 | 2.5 | 10 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 2-Butanone | 8.2 | 2.0 | 10 | J | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Isopropylbenzene | 1.0 | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 4-Isopropyltoluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| n-Butylbenzene | 0.89 | 0.25 | 3.0 | J | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| n-Propylbenzene | 1.2 | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| sec-Butylbenzene | 0.89 | 0.14 | 1.0 | J | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Xylenes, Total | 13 | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 99.6 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 91.8 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Surr: Dibromofluoromethane | 94.0 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:01:00 PM | R90977 |
| Surr: Toluene-d8 | 96.6 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:01:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon Client Sample ID: EAST LDU
Project: 2022 GW Sampling 3rd Quarter Collection Date: 9/8/2022 10:05:00 AM
Lab ID: 2209441-004B Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/15/2022 2:09:28 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EAST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:05:00 AM

Lab ID: 2209441-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 3.3 | 0.016 | 0.064 | E | mg/L | 1 | 9/13/2022 8:01:43 PM | 70105 |
| Motor Oil Range Organics (MRO) | 0.21 | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 8:01:43 PM | 70105 |
| Surr: DNOP | 84.5 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 8:01:43 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: 2-Fluorophenol | 0.745 | 0 | 15-84.5 | S | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: Phenol-d5 | 2.53 | 0 | 15-67 | S | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 4.59 | 0 | 15-108 | S | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: Nitrobenzene-d5 | 59.0 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 56.9 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 75.7 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 4:24:23 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.34 | 0.11 | 1.0 | JE | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Naphthalene | 0.24 | 0.20 | 0.30 | J | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| 1-Methylnaphthalene | 1.6 | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| 2-Methylnaphthalene | 0.34 | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Acenaphthene | 1.2 | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Fluorene | 1.5 | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Phenanthrene | 2.6 | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Anthracene | 0.46 | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Fluoranthene | 0.70 | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Pyrene | 0.36 | 0.32 | 1.0 | J | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209441-004C

Client Sample ID: EAST LDU

Collection Date: 9/8/2022 10:05:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 53.2 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 43.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 2:58:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 53.5 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 2:58:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EAST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:05:00 AM

Lab ID: 2209441-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Beryllium | 0.0014 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Cadmium | 0.015 | 0.0018 | 0.0020 | * | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Chromium | 2.4 | 0.0098 | 0.030 | * | mg/L | 5 | 9/13/2022 12:20:12 PM | 70092 |
| Cobalt | 0.027 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Nickel | 2.4 | 0.027 | 0.050 | * | mg/L | 5 | 9/13/2022 12:20:12 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Vanadium | 0.076 | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| Zinc | 0.22 | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:18:46 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:07:26 PM | 70092 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:07:26 PM | 70092 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:07:26 PM | 70092 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:07:26 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00023 | 0.000091 | 0.00020 | | mg/L | 1 | 9/17/2022 11:55:51 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209441-004E

Client Sample ID: EAST LDU

Collection Date: 9/8/2022 10:05:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.049 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Beryllium | 0.0020 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Chromium | 1.5 | 0.0098 | 0.030 | * | mg/L | 5 | 9/15/2022 6:30:02 PM | B91088 |
| Cobalt | 0.028 | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Nickel | 2.5 | 0.016 | 0.050 | * | mg/L | 5 | 9/15/2022 6:30:02 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Vanadium | 0.011 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| Zinc | 0.093 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:28:05 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:32:37 PM | A91030 |
| Arsenic | 0.00079 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:32:37 PM | A91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:32:37 PM | A91030 |
| Selenium | 0.00045 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/13/2022 4:45:21 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 11:57:59 AM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: WEST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.055 | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 5:03:00 PM | R90998 |
| Surr: BFB | 122 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:03:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 0.93 | 0.23 | 1.0 | J | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Ethylbenzene | 0.69 | 0.21 | 1.0 | J | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | 2.5 | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | 0.61 | 0.18 | 1.0 | J | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Acetone | 10 | 2.5 | 10 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 99.8 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 93.7 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Surr: Dibromofluoromethane | 96.2 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:24:00 PM | R90977 |
| Surr: Toluene-d8 | 92.2 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:24:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209441-005B

Client Sample ID: WEST LDU

Collection Date: 9/8/2022 10:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/15/2022 2:39:55 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: WEST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 3.0 | 0.016 | 0.064 | E | mg/L | 1 | 9/13/2022 8:49:17 PM | 70105 |
| Motor Oil Range Organics (MRO) | 0.073 | 0.052 | 0.080 | JE | mg/L | 1 | 9/13/2022 8:49:17 PM | 70105 |
| Surr: DNOP | 107 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 8:49:17 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: 2-Fluorophenol | 1.54 | 0 | 15-84.5 | S | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | S | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 5.29 | 0 | 15-108 | S | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: Nitrobenzene-d5 | 68.2 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 67.0 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 81.1 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 5:05:49 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 7.1 | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| 1-Methylnaphthalene | 0.34 | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Fluorene | 0.20 | 0.095 | 0.30 | J | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: WEST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 60.8 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 51.9 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 3:42:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 55.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 3:42:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: WEST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.11 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Cadmium | 0.0054 | 0.0018 | 0.0020 | * | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Chromium | 0.81 | 0.0020 | 0.0060 | * | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Cobalt | 0.011 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Nickel | 0.99 | 0.0053 | 0.010 | * | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Vanadium | 0.032 | 0.0035 | 0.050 | J | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| Zinc | 0.12 | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:21:29 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:09:53 PM | 70092 |
| Arsenic | 0.00074 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/14/2022 4:09:53 PM | 70092 |
| Lead | 0.00054 | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:09:53 PM | 70092 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:09:53 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:00:07 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: WEST LDU

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.029 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Beryllium | 0.0013 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Chromium | 0.27 | 0.0020 | 0.0060 | * | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Cobalt | 0.0031 | 0.0024 | 0.0060 | J | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Nickel | 1.1 | 0.016 | 0.050 | * | mg/L | 5 | 9/15/2022 6:34:03 PM | B91088 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Vanadium | 0.0052 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| Zinc | 0.12 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:32:05 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:35:18 PM | A91030 |
| Arsenic | 0.00059 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:35:18 PM | A91030 |
| Lead | 0.00011 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/13/2022 2:35:18 PM | A91030 |
| Selenium | 0.00070 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/13/2022 4:48:02 PM | A91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:02:16 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/13/2022 5:22:00 PM | R90998 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 5:22:00 PM | R90998 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Acetone | 7.1 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Methylene Chloride | 2.6 | 0.50 | 3.0 | J | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 99.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 89.0 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:47:00 PM | R90977 |
| Surr: Toluene-d8 | 91.6 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 3:47:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 3:40:47 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.047 | 0.016 | 0.064 | JE | mg/L | 1 | 9/13/2022 9:36:41 PM | 70105 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 9:36:41 PM | 70105 |
| Surr: DNOP | 108 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 9:36:41 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: 2-Fluorophenol | 29.1 | 0 | 15-84.5 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: Phenol-d5 | 21.7 | 0 | 15-67 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 29.6 | 0 | 15-108 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: Nitrobenzene-d5 | 37.9 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 37.1 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 45.9 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 5:47:16 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 37.0 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 33.7 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 4:26:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 45.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 4:26:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.011 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:24:17 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:12:19 PM | 70092 |
| Arsenic | 0.0041 | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:12:19 PM | 70092 |
| Lead | 0.00013 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/14/2022 4:12:19 PM | 70092 |
| Selenium | 0.0012 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:12:19 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00015 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:04:25 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022

Lab ID: 2209441-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.010 | 0.0011 | 0.0020 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Silver | 0.0056 | 0.0013 | 0.0050 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Vanadium | 0.0026 | 0.0017 | 0.050 | J | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 9/15/2022 6:36:06 PM | B91088 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:38:00 PM | B91030 |
| Arsenic | 0.00024 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:38:00 PM | B91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:38:00 PM | B91030 |
| Selenium | 0.00071 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 1:13:38 PM | A91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:06:34 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-8-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/8/2022 10:30:00 AM

Lab ID: 2209441-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Acetone | 20 | 2.5 | 10 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 2-Butanone | 29 | 2.0 | 10 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 93.3 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Surr: Dibromofluoromethane | 99.6 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:10:00 PM | R90977 |
| Surr: Toluene-d8 | 89.5 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:10:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209441

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: TRIP BLANK

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209441-008A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Methylene Chloride | 4.8 | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 89.5 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:33:00 PM | R90977 |
| Surr: Toluene-d8 | 90.3 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 4:33:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209441-008B

Client Sample ID: TRIP BLANK

Collection Date:

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 4:41:34 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 19, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1535062

Samples Received: 09/13/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2209441-001F EB-09-08-22 L1535062-01 | 5 | |
| 2209441-002F PW-3 L1535062-02 | 6 | <div><div>4</div>Cn</div> |
| 2209441-003F PW-4 L1535062-03 | 7 | <div><div>5</div>Sr</div> |
| 2209441-004F EAST LDU L1535062-04 | 8 | |
| 2209441-005F WEST LDU L1535062-05 | 9 | <div><div>6</div>Qc</div> |
| 2209441-006F DUP 9-8-22 L1535062-06 | 10 | <div><div>7</div>Gl</div> |
| Qc: Quality Control Summary | 11 | |
| Wet Chemistry by Method 4500CN E-2016 | 11 | <div><div>8</div>Al</div> |
| Gl: Glossary of Terms | 12 | |
| Al: Accreditations & Locations | 13 | <div><div>9</div>Sc</div> |
| Sc: Sample Chain of Custody | 14 | |

2209441-001F EB-09-08-22 L1535062-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 15:56 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

2209441-002F PW-3 L1535062-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 15:57 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

4
Cn

5
Sr

2209441-003F PW-4 L1535062-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:03 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

6
Qc

7
Gl

2209441-004F EAST LDU L1535062-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:04 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

8
Al

9
Sc

2209441-005F WEST LDU L1535062-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:05 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209441-006F DUP 9-8-22 L1535062-06 WW

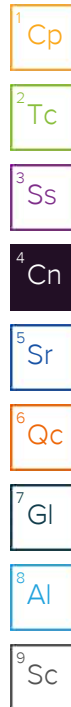
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:06 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 15:56 | WG1925290 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 09/08/22 09:10

L1535062

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 15:57 | WG1925290 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/08/22 09:40

L1535062

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 16:03 | WG1925290 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 09/08/22 10:05

L1535062

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 16:04 | WG1925290 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 16:05 | WG1925290 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/08/22 00:00

L1535062

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/19/2022 16:06 | WG1925290 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3838823-1 09/19/22 15:37

| Analyte | MB Result
ug/l | MB Qualifier | MB MDL
ug/l | MB RDL
ug/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 1.80 | 5.00 |

L1533610-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1533610-02 09/19/22 15:41 • (DUP) R3838823-3 09/19/22 15:42

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | 20 |

L1534252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534252-02 09/19/22 15:49 • (DUP) R3838823-6 09/19/22 15:50

| Analyte | Original Result
ug/l | DUP Result
ug/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | U | U | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3838823-2 09/19/22 15:38

| Analyte | Spike Amount
ug/l | LCS Result
ug/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 100 | 95.9 | 95.9 | 87.1-120 | |

L1534232-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534232-10 09/19/22 15:44 • (MS) R3838823-4 09/19/22 15:45 • (MSD) R3838823-5 09/19/22 15:46

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 94.7 | 94.8 | 94.7 | 94.8 | 1 | 90.0-110 | | | 0.106 | 20 |

L1535062-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535062-02 09/19/22 15:57 • (MS) R3838823-7 09/19/22 15:59 • (MSD) R3838823-8 09/19/22 16:02

| Analyte | Spike Amount
ug/l | Original Result
ug/l | MS Result
ug/l | MSD Result
ug/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 100 | U | 93.6 | 91.9 | 93.6 | 91.9 | 1 | 90.0-110 | | | 1.83 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|-------------|
|-----------|-------------|

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

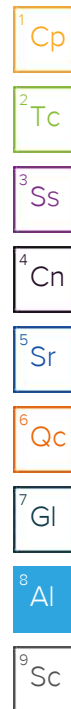
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1



4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

B227

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|---|--------------|-------------------------|-------------|------------------------------|----------------------|----------------------------|-------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: _____ | | | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | L1535062 | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2209441-001F | EB-09-08-22 | 500AMBHDP | Groundw | 9/8/2022 8:35:00 AM | 1 | Total Cyanide J and MDL |
| 2 | 2209441-002F | PW-3 | 500AMBHDP | Groundw | 9/8/2022 9:10:00 AM | 1 | Total Cyanide J and MDL |
| 3 | 2209441-003F | PW-4 | 500AMBHDP | Groundw | 9/8/2022 9:40:00 AM | 1 | Total Cyanide J and MDL |
| 4 | 2209441-004F | EAST LDU | 500AMBHDP | Groundw | 9/8/2022 10:05:00 AM | 1 | Total Cyanide J and MDL |
| 5 | 2209441-005F | WEST LDU | 500AMBHDP | Groundw | 9/8/2022 10:30:00 AM | 1 | Total Cyanide J and MDL |
| 6 | 2209441-006F | DUP 9-8-22 | 500AMBHDP | Groundw | 9/8/2022 | 1 | Total Cyanide J and MDL |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ N If Applicable
 COC Signed/Accurate: ☒ N VOA Zero Headspace: ☒ Y N
 Bottles arrive intact: ☒ N Pres. Correct/Check: ☒ Y N
 Correct bottles used: ☒ N
 Sufficient volume sent: ☒ N
 RAB Screen <0.5 mR/hr: ☒ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-----------------------|----------------------|--------------------|----------------------|-------------------|--|--|
| Relinquished By: | Date: 9/9/2022 | Time: 3:52 PM | Received By: _____ | Date: _____ | Time: _____ | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: _____ | Date: _____ | Time: _____ | Received By: _____ | Date: _____ | Time: _____ | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: _____ | Date: _____ | Time: _____ | Received By: | Date: 9/13/22 | Time: 8:00 | FOR LAB USE ONLY | |
| TAT: Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples 14 °C Attempt to Cool? _____ | |
| Comments: _____ | | | | | | _____ | |

TRK# 5255 8093 3382

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70092 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254082 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0030 | | | | | | | | J |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70092 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254083 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 94.5 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.7 | 50 | 150 | | | J |
| Cadmium | 0.0023 | 0.0020 | 0.002000 | 0 | 114 | 50 | 150 | | | |
| Chromium | 0.0070 | 0.0060 | 0.006000 | 0 | 117 | 50 | 150 | | | |
| Cobalt | 0.0050 | 0.0060 | 0.006000 | 0 | 83.1 | 50 | 150 | | | J |
| Nickel | 0.0063 | 0.010 | 0.005000 | 0 | 126 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 100 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70092 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254084 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.9 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|------|----------|-------------|------|----------|------|
| Sample ID: 2209441-006DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: DUP 9-8-22 | | Batch ID: 70092 | | RunNo: 90990 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254122 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0.01130 | 96.4 | 70 | 130 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 70 | 130 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.9 | 70 | 130 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 94.0 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0.01338 | 94.9 | 70 | 130 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 91.8 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.7 | 70 | 130 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2209441-006DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: DUP 9-8-22 | | Batch ID: 70092 | | RunNo: 90990 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254123 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0.01130 | 101 | 70 | 130 | 4.68 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | 5.54 | 20 | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 70 | 130 | 5.44 | 20 | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.5 | 70 | 130 | 5.60 | 20 | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0.01338 | 98.8 | 70 | 130 | 3.90 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.1 | 70 | 130 | 5.63 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 70 | 130 | 3.94 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | 4.46 | 20 | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 104 | 70 | 130 | 7.22 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258295 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258297 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0015 | 0.0020 | 0.002000 | 0 | 75.8 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 101 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.7 | 50 | 150 | | | J |
| Chromium | 0.0073 | 0.0060 | 0.006000 | 0 | 121 | 50 | 150 | | | |
| Cobalt | 0.0068 | 0.0060 | 0.006000 | 0 | 114 | 50 | 150 | | | |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 105 | 50 | 150 | | | J |
| Silver | 0.0057 | 0.0050 | 0.005000 | 0 | 114 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 115 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 124 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91088 | RunNo: 91088 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258298 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 108 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: B91030 | | RunNo: 91030 | | | | | | |
| Prep Date: | | Analysis Date: 9/13/2022 | | SeqNo: 3255545 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B91030 | | RunNo: 91030 | | | | | | |
| Prep Date: | | Analysis Date: 9/13/2022 | | | SeqNo: 3255546 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|-------------|------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: LCSW | | Batch ID: B91030 | | | RunNo: 91030 | | | | | |
| Prep Date: | | Analysis Date: 9/13/2022 | | | SeqNo: 3255547 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.9 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------|---------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-70092 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70092 | | RunNo: 91042 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | SeqNo: 3256115 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00063 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | 0.00040 | 0.00050 | | | | | | | | J |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-70092 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70092 | | | RunNo: 91042 | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | | SeqNo: 3256116 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0014 | 0.0010 | 0.001000 | 0 | 144 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 109 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70092 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 70092 | | RunNo: 91042 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256116 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 121 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-70092 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 70092 | | RunNo: 91042 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256117 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255541 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255542 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | |
| Selenium | 0.00088 | 0.0010 | 0.001000 | 0 | 87.9 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255543 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.6 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 91.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255549 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255550 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255550 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255551 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.9 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209441-006EMSSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: DUP 9-8-22 | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255581 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.2 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0.0002424 | 99.4 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|-------|----------|------|
| Sample ID: 2209441-006EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: DUP 9-8-22 | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255582 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.7 | 70 | 130 | 0.522 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0.0002424 | 100 | 70 | 130 | 0.908 | 20 | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 91.9 | 70 | 130 | 3.30 | 20 | |

| | | | | | | | | | | |
|----------------|--------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257815 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | ND | 0.0010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | Batch ID: A91078 | | | RunNo: 91078 | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | | | SeqNo: 3257816 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0013 | 0.0010 | 0.001000 | 0 | 129 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | Batch ID: A91078 | | | RunNo: 91078 | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | | | SeqNo: 3257817 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-70232 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 70232 | RunNo: 91107 |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259050 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-70232 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 70232 | RunNo: 91107 |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259051 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00019 0.00020 0.0001500 | 0 124 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-70232 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 70232 | RunNo: 91107 |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259052 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 0.00020 0.005000 | 0 105 85 115 |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70123 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254670 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70123 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254671 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.091 | 0.010 | 0.1000 | 0 | 91.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70123 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254672 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.098 | 0.010 | 0.1000 | 0 | 98.3 | 70 | 130 | 7.22 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209441-002BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PW-3 | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254675 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.089 | 0.0095 | 0.09537 | 0 | 93.1 | 65 | 135 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70123 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70123 | RunNo: 91007 | | | | | | | | |
| Prep Date: 9/13/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254696 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258444 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258445 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-70173 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 70173 | RunNo: 91063 |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258447 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.088 | 0.010 0.1000 0 87.9 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-70173 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 70173 | RunNo: 91063 |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258448 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 0.1000 0 93.6 70 130 6.28 20 |

NOTES:

No trip blank was included with work order

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-70105 | SampType: LCS | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSW | Batch ID: 70105 | | | RunNo: 90980 | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | | SeqNo: 3261749 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 81.4 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.021 | | 0.01875 | | 113 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-70105 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 70105 | | | RunNo: 90980 | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | | SeqNo: 3261750 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.23 | 0.064 | 0.1875 | 0 | 120 | 31.7 | 75.4 | 38.5 | 20 | RS |
| Surr: DNOP | 0.021 | | 0.01875 | | 112 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: MB-70105 | SampType: MBLK | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: PBW | Batch ID: 70105 | | | RunNo: 90980 | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | | SeqNo: 3261765 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.052 | 0.064 | | | | | | | | JE |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | E |
| Surr: DNOP | 0.038 | | 0.03750 | | 102 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R90998 | | RunNo: 90998 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254363 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.6 | 80 | 120 | | | |
| Surr: BFB | 45 | | 20.00 | | 223 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R90998 | | RunNo: 90998 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3254366 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 105 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R90977 | | RunNo: 90977 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255160 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.0 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 92.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R90977 | | RunNo: 90977 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255170 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R90977 | RunNo: 90977 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255170 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.9 | | 10.00 | | 89.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |

| Sample ID: 2209441-002ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PW-3 | Batch ID: R90977 | RunNo: 90977 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255200 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.5 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 99.8 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 96.0 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.3 | | 10.00 | | 93.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.3 | 70 | 130 | | | |

| Sample ID: 2209441-002amsd | SampType: MSD | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PW-3 | Batch ID: R90977 | RunNo: 90977 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255201 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 97.2 | 70 | 130 | 2.92 | 20 | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 91.5 | 70 | 130 | 6.41 | 20 | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 94.0 | 70 | 130 | 5.98 | 20 | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 87.7 | 70 | 130 | 5.67 | 20 | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | 5.86 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 92.4 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 8.9 | | 10.00 | | 89.4 | 70 | 130 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70094 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70094 | RunNo: 91043 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256095 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 53 | | 200.0 | | 26.4 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 24.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 53 | | 200.0 | | 26.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 45.9 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 40.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 66 | | 100.0 | | 66.1 | 34.4 | 134 | | | |

| Sample ID: lcs-70094 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70094 | RunNo: 91043 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256096 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70094 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70094 | | RunNo: 91043 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256096 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 57 | 10 | 100.0 | 0 | 57.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 53 | 5.0 | 100.0 | 0 | 52.9 | 15 | 89.8 | | | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.7 | 17 | 61.1 | | | |
| Pyrene | 92 | 10 | 100.0 | 0 | 92.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.3 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.5 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 55.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.4 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70094 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70094 | | RunNo: 91043 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256097 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 42 | 10 | 100.0 | 0 | 41.7 | 21.3 | 104 | 31.0 | 45.3 | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 37.8 | 15 | 89.8 | 33.2 | 39.6 | |
| Phenol | 53 | 20 | 200.0 | 0 | 26.6 | 17 | 61.1 | 34.4 | 42.5 | |
| Pyrene | 66 | 10 | 100.0 | 0 | 66.3 | 61 | 123 | 32.8 | 11.8 | R |
| Surr: 2-Fluorophenol | 62 | | 200.0 | | 30.9 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 24.2 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 44 | | 100.0 | | 44.1 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 41.7 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 69 | | 100.0 | | 68.5 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70094 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70094 | RunNo: 90997 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254249 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | E |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | E |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 41 | | 100.0 | | 40.6 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 48 | | 200.0 | | 23.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 39.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 59 | | 100.0 | | 59.0 | 72.3 | 147 | | | S |

| Sample ID: lcs-70094 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70094 | RunNo: 90997 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254250 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.44 | 0.10 | 2.000 | 0 | 22.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 29.8 | 82.7 | | | |
| Fluorene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 52.9 | 123 | | | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 75.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 51 | 147 | | | |
| Chrysene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 55.3 | 115 | | | S |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.2 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209441

07-Oct-22

Client: Marathon

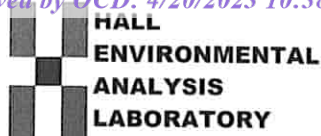
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70094 | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70094 | | RunNo: 90997 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254250 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 67 | | 200.0 | | 33.3 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 44 | | 100.0 | | 44.2 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: Icsd-70094 | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | | Batch ID: 70094 | | RunNo: 90997 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254251 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.40 | 0.10 | 2.000 | 0 | 20.0 | 20.2 | 48.4 | 9.52 | 30.1 | S |
| Naphthalene | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 21.3 | 79.9 | 5.41 | 25.6 | |
| 1-Methylnaphthalene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 22.2 | 80.3 | 5.26 | 25 | |
| 2-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 20.6 | 80.1 | 2.53 | 25 | |
| Acenaphthene | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 29.8 | 82.7 | 8.00 | 27.8 | |
| Fluorene | 0.88 | 0.30 | 2.000 | 0 | 44.0 | 33.3 | 86 | 8.70 | 26.4 | |
| Phenanthrene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 38.2 | 93.9 | 10.9 | 27.9 | |
| Anthracene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 41.1 | 95.6 | 8.33 | 25.6 | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 52.9 | 123 | 10.8 | 22.8 | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 65.0 | 51 | 113 | 14.3 | 20 | |
| Benz(a)anthracene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 51 | 147 | 5.00 | 24.1 | |
| Chrysene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 55.3 | 115 | 6.06 | 20 | S |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 44.4 | 136 | 4.65 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 31.4 | 165 | 2.50 | 21.1 | |
| Surr: Nitrobenzene-d5 | 36 | | 100.0 | | 35.5 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 62 | | 200.0 | | 31.1 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 33.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 40 | | 100.0 | | 39.6 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209441**RcptNo: **1**Received By: **Desiree Dominguez** 9/9/2022 3:25:00 PMCompleted By: **Desiree Dominguez** 9/9/2022 3:33:09 PM

Reviewed By:

KPG

9.9.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked 12-6
for pH: (<2 or >12) unless noted

Adjusted? NOChecked by: TMC 9/9/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.8 | Good | Yes | | | |
| 2 | 2.4 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 07, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209478

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/9/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209478
Date: 10/7/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates denote that the surrogate recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270SIMS:

The recovery for chrysene was low in the LCS/LCSD. This compound is reported in both the 8270SIM method and the standard 8270 method and is nondetect.

The recovery for 1,4-Dioxane was low in the LCSD.

Analytical Notes Regarding EPA Method 8270:

Samples "STP-1 to EP-2, EP-2 and Dup 9/9/22" were diluted due the the sample matrix.

Analytical Notes Regarding EPA Method 8015DRO:

The LCS/LCSD had elevated recoveries.

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 8:30:00 AM

Lab ID: 2209478-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 3:13:00 PM | A91113 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:13:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Acetone | 8.7 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 90.5 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:29:00 PM | R90977 |
| Surr: Toluene-d8 | 90.3 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:29:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-001B

Client Sample ID: EB-9-9-22

Collection Date: 9/9/2022 8:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 9/15/2022 5:41:57 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 8:30:00 AM

Lab ID: 2209478-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.043 | 0.016 | 0.064 | JE | mg/L | 1 | 9/13/2022 10:00:23 PM | 70105 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/13/2022 10:00:23 PM | 70105 |
| Surr: DNOP | 106 | 0 | 42.2-138 | | %Rec | 1 | 9/13/2022 10:00:23 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Chrysene | ND | 5.3 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: 2-Fluorophenol | 42.1 | 0 | 15-84.5 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: Phenol-d5 | 31.5 | 0 | 15-67 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 51.1 | 0 | 15-108 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: Nitrobenzene-d5 | 56.6 | 0 | 16.8-112 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 54.8 | 0 | 15-101 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 73.9 | 0 | 34.4-134 | | %Rec | 1 | 9/14/2022 6:29:22 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | E | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Chrysene | ND | 0.25 | 0.30 | E | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 8:30:00 AM

Lab ID: 2209478-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|------|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 51.7 | 0 | 31.6-100 | | %Rec | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 48.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/13/2022 5:10:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 65.1 | 0 | 72.3-147 | S | %Rec | 1 | 9/13/2022 5:10:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 8:30:00 AM

Lab ID: 2209478-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:39:18 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:19:40 PM | 70092 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:19:40 PM | 70092 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:19:40 PM | 70092 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:19:40 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00019 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:12:59 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 8:30:00 AM

Lab ID: 2209478-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Vanadium | 0.0019 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| Zinc | 0.0065 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 4:11:26 PM | B91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:51:28 PM | B91030 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:51:28 PM | B91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:51:28 PM | B91030 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:50:44 PM | B91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:15:07 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-001G

Client Sample ID: EB-9-9-22

Collection Date: 9/9/2022 8:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------------|--------|-------|-------|------|---------|----|----------------------|----------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: dms | |
| E. Coli | <1 | 1.000 | 1.000 | H | MPN/100 | 1 | 9/10/2022 7:30:00 PM | 70088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|---------------------|
| CLIENT: | Marathon | Client Sample ID: | EB-9-9-22 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/9/2022 8:30:00 AM |
| Lab ID: | 2209478-001H | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|------------------|-----|-----|------|-------|----|----------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | DO Depletion<2.0 | 2.0 | 2.0 | | mg/L | 1 | 9/14/2022 2:46:00 PM | 70067 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 3:32:00 PM | A91113 |
| Surr: BFB | 98.5 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:32:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Acetone | 8.7 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 90.8 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:52:00 PM | R90977 |
| Surr: Toluene-d8 | 90.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 6:52:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 6:42:40 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.18 | 0.016 | 0.064 | E | mg/L | 1 | 9/19/2022 3:48:13 PM | 70105 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | E | mg/L | 1 | 9/19/2022 3:48:13 PM | 70105 |
| Surr: DNOP | 48.3 | 0 | 42.2-138 | | %Rec | 1 | 9/19/2022 3:48:13 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Chrysene | ND | 53 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 16.8-112 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 15-101 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 34.4-134 | SD | %Rec | 10 | 9/14/2022 7:11:31 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | ED | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Chrysene | ND | 2.5 | 3.0 | ED | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 9/13/2022 5:55:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 9/13/2022 5:55:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.032 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Silver | 0.0022 | 0.0018 | 0.0050 | J | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| Zinc | 0.022 | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:42:37 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:22:07 PM | 70092 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:22:07 PM | 70092 |
| Lead | 0.00015 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/14/2022 4:22:07 PM | 70092 |
| Selenium | 0.0011 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:22:07 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00022 | 0.000091 | 0.00020 | | mg/L | 1 | 9/17/2022 12:17:16 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:00:00 AM

Lab ID: 2209478-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.024 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Silver | 0.0051 | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Vanadium | 0.0043 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| Zinc | 0.032 | 0.0032 | 0.010 | | mg/L | 1 | 9/19/2022 4:24:25 PM | B91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00065 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:54:09 PM | B91030 |
| Arsenic | 0.0021 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:54:09 PM | B91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:54:09 PM | B91030 |
| Selenium | 0.0011 | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:53:25 PM | B91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:19:24 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-002G

Client Sample ID: STP-1 to EP-2

Collection Date: 9/9/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------------|--------|-------|-------|------|---------|----|----------------------|----------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: dms | |
| E. Coli | >24196 | 10.00 | 10.00 | | MPN/100 | 10 | 9/10/2022 7:30:00 PM | 70088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-002H

Client Sample ID: STP-1 to EP-2

Collection Date: 9/9/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | >67.56 | 2.0 | 2.0 | E | mg/L | 1 | 9/14/2022 2:46:00 PM | 70067 |

NOTES:
E- Estimated value due to all bottles having overdepleted.

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.0094 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 3:52:00 PM | A91113 |
| Surr: BFB | 105 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:52:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Acetone | 15 | 2.5 | 10 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Carbon disulfide | 2.2 | 0.59 | 10 | J | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 91.4 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:15:00 PM | R90977 |
| Surr: Toluene-d8 | 93.3 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:15:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/15/2022 7:58:43 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.28 | 0.016 | 0.064 | E | mg/L | 1 | 9/21/2022 8:44:33 AM | 70105 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | E | mg/L | 1 | 9/21/2022 8:44:33 AM | 70105 |
| Surr: DNOP | 47.3 | 0 | 42.2-138 | | %Rec | 1 | 9/21/2022 8:44:33 AM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Chrysene | ND | 53 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 16.8-112 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 15-101 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 34.4-134 | SD | %Rec | 10 | 9/14/2022 7:53:43 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | ED | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Chrysene | ND | 2.5 | 3.0 | ED | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 9/13/2022 6:42:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 9/13/2022 6:42:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.15 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Cobalt | 0.018 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Nickel | 0.037 | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Silver | 0.0042 | 0.0018 | 0.0050 | J | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:45:56 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0018 | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:24:33 PM | 70092 |
| Arsenic | 0.011 | 0.00013 | 0.0010 | * | mg/L | 1 | 9/14/2022 4:24:33 PM | 70092 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/14/2022 4:24:33 PM | 70092 |
| Selenium | 0.0011 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:24:33 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00015 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:21:32 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.14 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Nickel | 0.038 | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Silver | 0.010 | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Vanadium | 0.0068 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| Zinc | 0.0059 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 4:28:50 PM | B91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0017 | 0.00044 | 0.0010 | | mg/L | 1 | 9/13/2022 2:56:51 PM | B91030 |
| Arsenic | 0.010 | 0.00012 | 0.0010 | * | mg/L | 1 | 9/13/2022 2:56:51 PM | B91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:56:51 PM | B91030 |
| Selenium | 0.0016 | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:56:07 PM | B91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00015 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:27:58 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-003G

Client Sample ID: EP-2

Collection Date: 9/9/2022 10:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------------|--------|-------|-------|------|---------|----|----------------------|----------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: dms | |
| E. Coli | 52 | 10.00 | 10.00 | | MPN/100 | 10 | 9/10/2022 7:30:00 PM | 70088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EP-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-003H

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|-----------------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 46 | 2.0 | 2.0 | R | mg/L | 1 | 9/14/2022 2:46:00 PM | 70067 |
| NOTES: | | | | | | | | |
| R- RPD between bottles >30% | | | | | | | | |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022 10:35:00 AM

Lab ID: 2209478-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 90.4 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:38:00 PM | R90977 |
| Surr: Toluene-d8 | 89.0 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 7:38:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 6:29:00 PM | B91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:29:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Acetone | 7.0 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 88.9 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:01:00 PM | R90977 |
| Surr: Toluene-d8 | 87.7 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:01:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/15/2022 8:59:46 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | E | mg/L | 1 | 9/19/2022 4:59:28 PM | 70105 |
| Motor Oil Range Organics (MRO) | 0.13 | 0.052 | 0.080 | E | mg/L | 1 | 9/19/2022 4:59:28 PM | 70105 |
| Surr: DNOP | 46.2 | 0 | 42.2-138 | | %Rec | 1 | 9/19/2022 4:59:28 PM | 70105 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Chrysene | ND | 53 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 16.8-112 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 15-101 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 34.4-134 | SD | %Rec | 10 | 9/14/2022 8:35:44 PM | 70094 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | ED | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Chrysene | ND | 2.5 | 3.0 | ED | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 9/13/2022 7:29:00 PM | 70094 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 9/13/2022 7:29:00 PM | 70094 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.030 | 0.0016 | 0.0030 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Silver | 0.0020 | 0.0018 | 0.0050 | J | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| Zinc | 0.025 | 0.0039 | 0.010 | | mg/L | 1 | 9/13/2022 12:49:16 PM | 70092 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/14/2022 4:27:00 PM | 70092 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 9/14/2022 4:27:00 PM | 70092 |
| Lead | 0.00016 | 0.000061 | 0.00050 | J | mg/L | 1 | 9/14/2022 4:27:00 PM | 70092 |
| Selenium | 0.0018 | 0.00037 | 0.0010 | | mg/L | 1 | 9/14/2022 4:27:00 PM | 70092 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00024 | 0.000091 | 0.00020 | | mg/L | 1 | 9/17/2022 12:30:06 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.025 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Silver | 0.0055 | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Vanadium | 0.0037 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| Zinc | 0.019 | 0.0032 | 0.010 | | mg/L | 1 | 9/19/2022 4:39:46 PM | B91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00058 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/13/2022 2:59:32 PM | B91030 |
| Arsenic | 0.0023 | 0.00012 | 0.0010 | | mg/L | 1 | 9/13/2022 2:59:32 PM | B91030 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/13/2022 2:59:32 PM | B91030 |
| Selenium | 0.0013 | 0.00034 | 0.0010 | | mg/L | 1 | 9/13/2022 4:58:48 PM | B91030 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/17/2022 12:32:15 PM | 70232 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005G

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------------|--------|-------|-------|------|---------|----|----------------------|----------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: dms | |
| E. Coli | >24196 | 10.00 | 10.00 | H | MPN/100 | 10 | 9/10/2022 7:30:00 PM | 70088 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-9-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/9/2022

Lab ID: 2209478-005H

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----|------|-------|----|----------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 47 | 2.0 | 2.0 | | mg/L | 1 | 9/14/2022 2:46:00 PM | 70067 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209478-006A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Acetone | 6.9 | 2.5 | 10 | J | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Surr: 4-Bromofluorobenzene | 89.3 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:24:00 PM | R90977 |
| Surr: Toluene-d8 | 88.6 | 0 | 70-130 | | %Rec | 1 | 9/13/2022 8:24:00 PM | R90977 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209478

Date Reported: 10/7/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209478-006B

Client Sample ID: Trip Blank

Collection Date:

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 10:00:26 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 25, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1535069

Samples Received: 09/13/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|--|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2209478-001F EB 9-9-22 L1535069-01 | 5 | |
| 2209478-001I EB 9-9-22 L1535069-02 | 6 | <div><div>4</div>Cn</div> |
| 2209478-002F STP-1 TO EP-2 L1535069-03 | 7 | <div><div>5</div>Sr</div> |
| 2209478-002I STP-1 TO EP-2 L1535069-04 | 8 | |
| 2209478-003F EP-2 L1535069-05 | 9 | <div><div>6</div>Qc</div> |
| 2209478-003I EP-2 L1535069-06 | 10 | |
| 2209478-005F DUP 9-9-22 L1535069-07 | 11 | <div><div>7</div>Gl</div> |
| 2209478-005I DUP 9-2-22 L1535069-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 410.4 | 13 | <div><div>9</div>Sc</div> |
| Wet Chemistry by Method 4500CN E-2016 | 14 | |
| Gl: Glossary of Terms | 16 | |
| Al: Accreditations & Locations | 17 | |
| Sc: Sample Chain of Custody | 18 | |

2209478-001F EB 9-9-22 L1535069-01 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:07 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2209478-001I EB 9-9-22 L1535069-02 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1931912 | 1 | 09/24/22 16:00 | 09/24/22 18:48 | TQP | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-002F STP-1 TO EP-2 L1535069-03 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1925290 | 1 | 09/19/22 00:58 | 09/19/22 16:08 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-002I STP-1 TO EP-2 L1535069-04 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1931912 | 1 | 09/24/22 16:00 | 09/24/22 18:49 | TQP | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-003F EP-2 L1535069-05 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1928505 | 1 | 09/19/22 18:30 | 09/20/22 16:46 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-003I EP-2 L1535069-06 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1931912 | 1 | 09/24/22 16:00 | 09/24/22 18:49 | TQP | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-005F DUP 9-9-22 L1535069-07 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1928505 | 1 | 09/19/22 18:30 | 09/20/22 16:48 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209478-005I DUP 9-2-22 L1535069-08 WW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|-------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 410.4 | WG1931912 | 1 | 09/24/22 16:00 | 09/24/22 18:49 | TQP | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/19/2022 16:07 | WG1925290 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 44.7 | | 20.0 | 1 | 09/24/2022 18:48 | WG1931912 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 09/09/22 10:00

L1535069

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/19/2022 16:08 | WG1925290 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/09/22 10:00

L1535069

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 190 | | 20.0 | 1 | 09/24/2022 18:49 | WG1931912 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | P1 | 0.00500 | 1 | 09/20/2022 16:46 | WG1928505 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/09/22 10:35

L1535069

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 464 | | 20.0 | 1 | 09/24/2022 18:49 | WG1931912 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/20/2022 16:48 | WG1928505 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 181 | | 20.0 | 1 | 09/24/2022 18:49 | WG1931912 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3841005-1 09/24/22 18:47

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| COD | U | | 11.7 | 20.0 |

L1535069-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1535069-02 09/24/22 18:48 • (DUP) R3841005-3 09/24/22 18:49

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| COD | 44.7 | 50.2 | 1 | 11.7 | | 20 |

L1535371-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1535371-03 09/24/22 18:52 • (DUP) R3841005-4 09/24/22 18:52

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| COD | 106 | 109 | 1 | 2.68 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3841005-2 09/24/22 18:47

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| COD | 500 | 498 | 99.6 | 90.0-110 | |

L1535395-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535395-01 09/24/22 19:19 • (MS) R3841005-5 09/24/22 19:19 • (MSD) R3841005-6 09/24/22 19:19

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| COD | 500 | 164 | 648 | 646 | 96.9 | 96.6 | 1 | 80.0-120 | | | 0.258 | 20 |

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 4500CN E-2016

L1535069-01.03

Method Blank (MB)

(MB) R3838823-1 09/19/22 15:37

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1533610-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1533610-02 09/19/22 15:41 • (DUP) R3838823-3 09/19/22 15:42

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1534252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534252-02 09/19/22 15:49 • (DUP) R3838823-6 09/19/22 15:50

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3838823-2 09/19/22 15:38

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0959 | 95.9 | 87.1-120 | |

L1534232-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534232-10 09/19/22 15:44 • (MS) R3838823-4 09/19/22 15:45 • (MSD) R3838823-5 09/19/22 15:46

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0947 | 0.0948 | 94.7 | 94.8 | 1 | 90.0-110 | | | 0.106 | 20 |

L1535062-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535062-02 09/19/22 15:57 • (MS) R3838823-7 09/19/22 15:59 • (MSD) R3838823-8 09/19/22 16:02

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0936 | 0.0919 | 93.6 | 91.9 | 1 | 90.0-110 | | | 1.83 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1535069-05.07

Method Blank (MB)

(MB) R3839374-1 09/20/22 16:40

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1535069-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1535069-05 09/20/22 16:46 • (DUP) R3839374-3 09/20/22 16:47

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 200 | P1 | 20 |

L1535405-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1535405-02 09/20/22 16:59 • (DUP) R3839374-6 09/20/22 17:00

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.00747 | 0.00658 | 1 | 12.7 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3839374-2 09/20/22 16:41

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.108 | 108 | 87.1-120 | |

L1535358-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535358-02 09/20/22 16:55 • (MS) R3839374-4 09/20/22 16:57 • (MSD) R3839374-5 09/20/22 16:58

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.101 | 0.102 | 98.4 | 99.4 | 1 | 90.0-110 | | | 0.985 | 20 |

L1535554-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535554-02 09/20/22 17:01 • (MS) R3839374-7 09/20/22 17:02 • (MSD) R3839374-8 09/20/22 17:05

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0829 | 0.0829 | 80.7 | 80.7 | 1 | 90.0-110 | J6 | J6 | 0.000 | 20 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

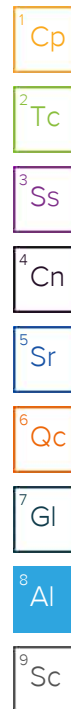
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

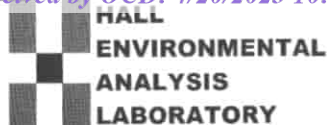
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 3334 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

B226

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|---------|----------------------|--------------|------------------------------|
| 1 | 2209478-001F | EB-9-9-22 | 500AMBHDP
F.NAOH | Groundw | 9/9/2022 8:30:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2209478-001I | EB-9-9-22 | 125HDPH2S
04 | Groundw | 9/9/2022 8:30:00 AM | 1 | COD- J and MDL - 02 |
| 3 | 2209478-002F | STP-1 to EP-2 | 500AMBHDP
F.NAOH | Groundw | 9/9/2022 10:00:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2209478-002I | STP-1 to EP-2 | 125HDPH2S
04 | Groundw | 9/9/2022 10:00:00 AM | 1 | COD- J and MDL - 04 |
| 5 | 2209478-003F | EP-2 | 500AMBHDP
F.NAOH | Groundw | 9/9/2022 10:35:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2209478-003I | EP-2 | 125HDPH2S
04 | Groundw | 9/9/2022 10:35:00 AM | 1 | COD- J and MDL - 06 |
| 7 | 2209478-005F | DUP 9-9-22 | 500AMBHDP
F.NAOH | Groundw | | 1 | Total Cyanide J and MDL - 07 |
| 8 | 2209478-005I | DUP 9-9-22 | 125HDPH2S
04 | Groundw | | 1 | COD- J and MDL - 08 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

OK

| | | | | | | | |
|--|-----------------------|----------------------|--------------|----------------------|-------------------|---|--|
| Relinquished By: | Date: 9/9/2022 | Time: 4:02 PM | Received By: | Date: | Time: | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: 9/13/22 | Time: 9:00 | Temp of samples .4 °C Attempt to Cool? ☐ | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: | |

TRK# 5255 8093 3282

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70092 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254082 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0030 | | | | | | | | J |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-70092 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254083 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 94.5 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.7 | 50 | 150 | | | J |
| Cadmium | 0.0023 | 0.0020 | 0.002000 | 0 | 114 | 50 | 150 | | | |
| Chromium | 0.0070 | 0.0060 | 0.006000 | 0 | 117 | 50 | 150 | | | |
| Cobalt | 0.0050 | 0.0060 | 0.006000 | 0 | 83.1 | 50 | 150 | | | J |
| Nickel | 0.0063 | 0.010 | 0.005000 | 0 | 126 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 100 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 104 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 113 | 50 | 150 | | | |

| Sample ID: LCS-70092 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70092 | RunNo: 90990 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254084 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.9 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.6 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.5 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260464 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260465 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0027 | 0.0020 | 0.002000 | 0 | 135 | 50 | 150 | | | |
| Beryllium | 0.0022 | 0.0020 | 0.002000 | 0 | 108 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 89.5 | 50 | 150 | | | J |
| Chromium | 0.0048 | 0.0060 | 0.006000 | 0 | 79.8 | 50 | 150 | | | J |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 103 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 94.5 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260466 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 2209478-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-9-9-22 | Batch ID: B91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260541 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 70 | 130 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.9 | 70 | 130 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Silver | 0.093 | 0.0050 | 0.1000 | 0 | 92.8 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.001917 | 99.9 | 70 | 130 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0.006535 | 102 | 70 | 130 | | | |

| Sample ID: 2209478-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: EB-9-9-22 | Batch ID: B91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260542 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 70 | 130 | 0.644 | 20 | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 70 | 130 | 1.67 | 20 | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 1.15 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.3 | 70 | 130 | 0.554 | 20 | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | 0.362 | 20 | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.5 | 70 | 130 | 0.610 | 20 | |
| Silver | 0.091 | 0.0050 | 0.1000 | 0 | 91.4 | 70 | 130 | 1.48 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.001917 | 99.1 | 70 | 130 | 0.758 | 20 | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.006535 | 101 | 70 | 130 | 1.19 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: B91030 | | RunNo: 91030 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255545 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B91030 | | RunNo: 91030 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255546 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B91030 | | RunNo: 91030 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255547 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.9 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70092 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 70092 | | RunNo: 91042 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256115 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00063 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | 0.00040 | 0.00050 | | | | | | | | J |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70092 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 70092 | | RunNo: 91042 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256116 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-70092 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70092 | | | RunNo: 91042 | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | | SeqNo: 3256116 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0014 | 0.0010 | 0.001000 | 0 | 144 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 109 | 50 | 150 | | | |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 121 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-70092 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70092 | | | RunNo: 91042 | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | | SeqNo: 3256117 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209478-005DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP 9-9-22 | | Batch ID: 70092 | | | RunNo: 91042 | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | | SeqNo: 3256181 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.031 | 0.0010 | 0.02500 | 0 | 125 | 70 | 130 | | | |
| Arsenic | 0.028 | 0.0010 | 0.02500 | 0.002537 | 103 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.0001648 | 88.1 | 70 | 130 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0.001841 | 95.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209478-005DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP 9-9-22 | | Batch ID: 70092 | | | RunNo: 91042 | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/14/2022 | | | SeqNo: 3256182 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.031 | 0.0010 | 0.02500 | 0 | 122 | 70 | 130 | 1.96 | 20 | |
| Arsenic | 0.032 | 0.0010 | 0.02500 | 0.002537 | 117 | 70 | 130 | 11.3 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0.0001648 | 100 | 70 | 130 | 12.6 | 20 | |
| Selenium | 0.030 | 0.0010 | 0.02500 | 0.001841 | 114 | 70 | 130 | 16.7 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255549 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255550 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.5 | 50 | 150 | | | J |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 114 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B91030 | RunNo: 91030 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255551 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.9 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.6 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70232 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 70232 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259050 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70232 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70232 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259051 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00019 | 0.00020 | 0.0001500 | 0 | 124 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70232 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 70232 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259052 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209478-003DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: EP-2 | Batch ID: 70232 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259103 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0048 | 0.00020 | 0.005000 | 0.0001542 | 92.5 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209478-003DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: EP-2 | Batch ID: 70232 | RunNo: 91107 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/17/2022 | SeqNo: 3259104 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0047 | 0.00020 | 0.005000 | 0.0001542 | 90.7 | 75 | 125 | 1.94 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258444 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258445 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70173 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258447 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.088 | 0.010 | 0.1000 | 0 | 87.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70173 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258448 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 | 0.1000 | 0 | 93.6 | 70 | 130 | 6.28 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70105 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70105 | | RunNo: 90980 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | SeqNo: 3261749 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | 0.1875 | 0 | 81.4 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.021 | | 0.01875 | | 113 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70105 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70105 | | RunNo: 90980 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | SeqNo: 3261750 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.23 | 0.064 | 0.1875 | 0 | 120 | 31.7 | 75.4 | 38.5 | 20 | RS |
| Surr: DNOP | 0.021 | | 0.01875 | | 112 | 42.2 | 138 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70105 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70105 | | RunNo: 90980 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | | SeqNo: 3261765 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.052 | 0.064 | | | | | | | | JE |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | E |
| Surr: DNOP | 0.038 | | 0.03750 | | 102 | 42.2 | 138 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: LCSW | Batch ID: A91113 | | | RunNo: 91113 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3259450 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 210 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: PBW | Batch ID: A91113 | | | RunNo: 91113 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3259451 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 97.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: mb2 | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: PBW | Batch ID: B91113 | | | RunNo: 91113 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3259475 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209478-005a ms | SampType: MS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: DUP 9-9-22 | Batch ID: B91113 | | | RunNo: 91113 | | | | | | |
| Prep Date: | Analysis Date: 9/17/2022 | | | SeqNo: 3259484 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.40 | 0.050 | 0.5000 | 0 | 80.2 | 70 | 130 | | | |
| Surr: BFB | 40 | | 20.00 | | 199 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209478-005A MSD | SampType: MSD | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
| Client ID: DUP 9-9-22 | Batch ID: B91113 | | | RunNo: 91113 | | | | | | |
| Prep Date: | Analysis Date: 9/17/2022 | | | SeqNo: 3259485 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.37 | 0.050 | 0.5000 | 0 | 73.5 | 70 | 130 | 8.75 | 20 | |
| Surr: BFB | 38 | | 20.00 | | 190 | 70 | 130 | 0 | 0 | S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R90977 | | RunNo: 90977 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255160 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.0 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.9 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 92.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 92.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.7 | 70 | 130 | | | |

| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R90977 | | RunNo: 90977 | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | | SeqNo: 3255170 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|--------------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R90977 | RunNo: 90977 | | | | | | | | |
| Prep Date: | Analysis Date: 9/13/2022 | SeqNo: 3255170 | | Units: µg/L | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.9 | | 10.00 | | 89.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70094 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70094 | RunNo: 91043 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256095 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 53 | | 200.0 | | 26.4 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 24.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 53 | | 200.0 | | 26.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 45.9 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 40.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 66 | | 100.0 | | 66.1 | 34.4 | 134 | | | |

| Sample ID: lcs-70094 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70094 | RunNo: 91043 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256096 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70094 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70094 | | RunNo: 91043 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256096 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 57 | 10 | 100.0 | 0 | 57.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 53 | 5.0 | 100.0 | 0 | 52.9 | 15 | 89.8 | | | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.7 | 17 | 61.1 | | | |
| Pyrene | 92 | 10 | 100.0 | 0 | 92.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.3 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.5 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 55.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.5 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 98.4 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70094 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70094 | | RunNo: 91043 | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/14/2022 | | SeqNo: 3256097 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 42 | 10 | 100.0 | 0 | 41.7 | 21.3 | 104 | 31.0 | 45.3 | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 37.8 | 15 | 89.8 | 33.2 | 39.6 | |
| Phenol | 53 | 20 | 200.0 | 0 | 26.6 | 17 | 61.1 | 34.4 | 42.5 | |
| Pyrene | 66 | 10 | 100.0 | 0 | 66.3 | 61 | 123 | 32.8 | 11.8 | R |
| Surr: 2-Fluorophenol | 62 | | 200.0 | | 30.9 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 24.2 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 44 | | 100.0 | | 44.1 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 41.7 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 69 | | 100.0 | | 68.5 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb-70094 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70094 | RunNo: 90997 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254249 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | E |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | E |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 41 | | 100.0 | | 40.6 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 48 | | 200.0 | | 23.8 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 40 | | 100.0 | | 39.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 59 | | 100.0 | | 59.0 | 72.3 | 147 | | | S |

| Sample ID: lcs-70094 | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70094 | RunNo: 90997 | | | | | | | | |
| Prep Date: 9/12/2022 | Analysis Date: 9/13/2022 | SeqNo: 3254250 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.44 | 0.10 | 2.000 | 0 | 22.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 29.8 | 82.7 | | | |
| Fluorene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 52.9 | 123 | | | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 75.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 51 | 147 | | | |
| Chrysene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 55.3 | 115 | | | S |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.2 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70094 | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70094 | | RunNo: 90997 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254250 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 67 | | 200.0 | | 33.3 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.1 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 44 | | 100.0 | | 44.2 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: Icsd-70094 | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | | Batch ID: 70094 | | RunNo: 90997 | | | | | | |
| Prep Date: 9/12/2022 | | Analysis Date: 9/13/2022 | | SeqNo: 3254251 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.40 | 0.10 | 2.000 | 0 | 20.0 | 20.2 | 48.4 | 9.52 | 30.1 | S |
| Naphthalene | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 21.3 | 79.9 | 5.41 | 25.6 | |
| 1-Methylnaphthalene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 22.2 | 80.3 | 5.26 | 25 | |
| 2-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 20.6 | 80.1 | 2.53 | 25 | |
| Acenaphthene | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 29.8 | 82.7 | 8.00 | 27.8 | |
| Fluorene | 0.88 | 0.30 | 2.000 | 0 | 44.0 | 33.3 | 86 | 8.70 | 26.4 | |
| Phenanthrene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 38.2 | 93.9 | 10.9 | 27.9 | |
| Anthracene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 41.1 | 95.6 | 8.33 | 25.6 | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 52.9 | 123 | 10.8 | 22.8 | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 65.0 | 51 | 113 | 14.3 | 20 | |
| Benz(a)anthracene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 51 | 147 | 5.00 | 24.1 | |
| Chrysene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 55.3 | 115 | 6.06 | 20 | S |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 44.4 | 136 | 4.65 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 31.4 | 165 | 2.50 | 21.1 | |
| Surr: Nitrobenzene-d5 | 36 | | 100.0 | | 35.5 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 62 | | 200.0 | | 31.1 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 33.9 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 40 | | 100.0 | | 39.6 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|----------------------------|---------------------------------|--|
| Sample ID: MB-70067 | SampType: MBLK | TestCode: SM5210B: BOD |
| Client ID: PBW | Batch ID: 70067 | RunNo: 91049 |
| Prep Date: 9/9/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256428 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | ND | 2.0 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-70067 | SampType: LCS | TestCode: SM5210B: BOD |
| Client ID: LCSW | Batch ID: 70067 | RunNo: 91049 |
| Prep Date: 9/9/2022 | Analysis Date: 9/14/2022 | SeqNo: 3256429 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | 167 | 2.0 198.0 0 84.3 84.6 115.4 S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209478

07-Oct-22

Client: Marathon

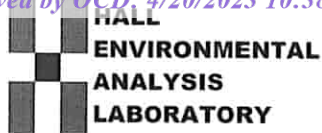
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------------|---------------------------------|--|-------------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70088 | SampType: MBLK | TestCode: SM 9223B Fecal Indicator: E. coli MPN | | | | | | | | |
| Client ID: PBW | Batch ID: 70088 | RunNo: 90938 | | | | | | | | |
| Prep Date: 9/9/2022 | Analysis Date: 9/10/2022 | SeqNo: 3251359 | Units: MPN/100mL | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| E. Coli | <1 | 1.000 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**Work Order Number: **2209478**

RcptNo: 1

Received By: **Kassandra Payan** 9/9/2022 3:25:00 PMCompleted By: **Desiree Dominguez** 9/9/2022 3:41:48 PMReviewed By: *Handwritten signatures and date 9-09-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved bottles checked for pH: 12
(<2 or >12 unless noted)

Adjusted? NOChecked by: *Handwritten signature* 9-9-22*unlabeled by = Jn 9/9/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.0 | Good | Yes | | | |
| 2 | 5.7 | Good | Yes | | | |
| 3 | -0.5 | Good | Yes | | | |
| 4 | 5.8 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 06, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209635

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 9/14/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209635
Date: 10/6/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates denote that the surrogate recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:
Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample MKTF-18R

Analytical Notes Regarding EPA Method 8015DRO:
The LCS had slightly elevated recovery. The LCSD had acceptable recoveries.

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 9:38:00 AM | A91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:38:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Acetone | 14 | 2.5 | 10 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 2-Butanone | 11 | 2.0 | 10 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Surr: 4-Bromofluorobenzene | 92.4 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:33:00 PM | R91021 |
| Surr: Toluene-d8 | 90.8 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:33:00 PM | R91021 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/15/2022 11:01:10 PM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | JE | mg/L | 1 | 9/15/2022 4:37:50 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 4:37:50 PM | 70190 |
| Surr: DNOP | 85.1 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 4:37:50 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: 2-Fluorophenol | 32.5 | 0 | 15-84.5 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: Phenol-d5 | 25.5 | 0 | 15-67 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 45.2 | 0 | 15-108 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: Nitrobenzene-d5 | 41.7 | 0 | 16.8-112 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 41.7 | 0 | 15-101 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 65.4 | 0 | 34.4-134 | | %Rec | 1 | 9/16/2022 5:41:53 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.16 | 0.11 | 1.0 | J | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 4:21:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 44.4 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 45.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 4:21:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 73.7 | 0 | 72.3-147 | | %Rec | 1 | 9/15/2022 4:21:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:30:34 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/15/2022 1:47:54 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:45:09 PM | 70179 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/16/2022 1:45:09 PM | 70179 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:45:09 PM | 70179 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/16/2022 1:45:09 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:02:07 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:00:00 AM

Lab ID: 2209635-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| Zinc | 0.0064 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 5:25:32 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 4:56:56 PM | C91078 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 4:56:56 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 4:56:56 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 4:56:56 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:04:14 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:30:00 AM

Lab ID: 2209635-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.025 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 9:58:00 AM | A91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:58:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Acetone | 6.4 | 2.5 | 10 | J | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Chlorobenzene | 0.29 | 0.16 | 1.0 | J | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| sec-Butylbenzene | 0.18 | 0.14 | 1.0 | J | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Surr: 4-Bromofluorobenzene | 90.3 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:56:00 PM | R91021 |
| Surr: Toluene-d8 | 90.3 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 7:56:00 PM | R91021 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:30:00 AM

Lab ID: 2209635-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 9/16/2022 1:02:45 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:30:00 AM

Lab ID: 2209635-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.068 | 0.016 | 0.064 | E | mg/L | 1 | 9/15/2022 5:01:34 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 5:01:34 PM | 70190 |
| Surr: DNOP | 92.1 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 5:01:34 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Di-n-butyl phthalate | 15 | 7.7 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: 2-Fluorophenol | 27.5 | 0 | 15-84.5 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: Phenol-d5 | 22.2 | 0 | 15-67 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 40.0 | 0 | 15-108 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: Nitrobenzene-d5 | 36.2 | 0 | 16.8-112 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 36.4 | 0 | 15-101 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 46.8 | 0 | 34.4-134 | | %Rec | 1 | 9/16/2022 6:24:39 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.98 | 0.11 | 1.0 | J | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Pyrene | 0.40 | 0.32 | 1.0 | J | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 5:05:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-46**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/13/2022 8:30:00 AM**Lab ID:** 2209635-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 37.7 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 39.9 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 5:05:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 42.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 5:05:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:30:00 AM

Lab ID: 2209635-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.068 | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:32:14 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Vanadium | 0.0043 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| Zinc | 0.0072 | 0.0039 | 0.010 | J | mg/L | 1 | 9/15/2022 1:51:15 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:47:36 PM | 70179 |
| Arsenic | 0.00082 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:47:36 PM | 70179 |
| Lead | 0.00073 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:47:36 PM | 70179 |
| Selenium | 0.00040 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:47:36 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/20/2022 3:06:21 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 8:30:00 AM

Lab ID: 2209635-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.037 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Beryllium | 0.00097 | 0.00088 | 0.0020 | J | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Silver | 0.0039 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Vanadium | 0.0056 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| Zinc | 0.0099 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 5:46:24 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 4:59:37 PM | C91078 |
| Arsenic | 0.00077 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 4:59:37 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 4:59:37 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 4:59:37 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:08:29 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 8.1 | 0.18 | 1.0 | | mg/L | 20 | 9/16/2022 10:17:00 AM | A91113 |
| Surr: BFB | 114 | 0 | 70-130 | | %Rec | 20 | 9/16/2022 10:17:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 1800 | 23 | 100 | | µg/L | 100 | 9/14/2022 8:19:00 PM | R91021 |
| Toluene | 570 | 2.0 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Ethylbenzene | 49 | 2.1 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Methyl tert-butyl ether (MTBE) | 130 | 3.9 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,2,4-Trimethylbenzene | 44 | 1.2 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,3,5-Trimethylbenzene | 15 | 1.8 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| cis-1,2-DCE | 8.7 | 3.9 | 10 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Isopropylbenzene | 3.7 | 1.8 | 10 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 4-Isopropyltoluene | 2.3 | 2.0 | 10 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| n-Butylbenzene | 3.3 | 2.5 | 30 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| n-Propylbenzene | 4.9 | 1.8 | 10 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| sec-Butylbenzene | 2.2 | 1.4 | 10 | J | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Xylenes, Total | 430 | 3.7 | 15 | | µg/L | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Surr: 1,2-Dichloroethane-d4 | 94.5 | 0 | 70-130 | | %Rec | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Surr: 4-Bromofluorobenzene | 91.7 | 0 | 70-130 | | %Rec | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Surr: Dibromofluoromethane | 93.8 | 0 | 70-130 | | %Rec | 10 | 9/14/2022 8:42:00 PM | R91021 |
| Surr: Toluene-d8 | 94.1 | 0 | 70-130 | | %Rec | 10 | 9/14/2022 8:42:00 PM | R91021 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/16/2022 2:03:38 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 3.1 | 0.016 | 0.064 | E | mg/L | 1 | 9/15/2022 5:25:21 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 5:25:21 PM | 70190 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 5:25:21 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Di-n-butyl phthalate | 27 | 7.7 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 1-Methylnaphthalene | 85 | 4.3 | 5.0 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 2-Methylnaphthalene | 90 | 4.2 | 5.0 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 2-Methylphenol | 19 | 5.0 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 3+4-Methylphenol | 5.9 | 5.1 | 10 | J | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Naphthalene | 54 | 3.2 | 5.0 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: 2-Fluorophenol | 32.4 | 0 | 15-84.5 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: Phenol-d5 | 24.9 | 0 | 15-67 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 58.2 | 0 | 15-108 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: Nitrobenzene-d5 | 44.9 | 0 | 16.8-112 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 50.6 | 0 | 15-101 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 63.3 | 0 | 34.4-134 | | %Rec | 1 | 9/16/2022 7:07:48 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 16 | 0.11 | 1.0 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Acenaphthene | 6.2 | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Fluorene | 8.2 | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Phenanthrene | 7.5 | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Anthracene | 0.58 | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Fluoranthene | 0.28 | 0.14 | 0.30 | J | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Pyrene | 0.64 | 0.32 | 1.0 | J | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Benz(a)anthracene | 0.18 | 0.15 | 0.30 | J | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 5:49:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 52.4 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 46.3 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 5:49:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 48.7 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 5:49:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.0 | 0.0079 | 0.015 | * | mg/L | 5 | 9/16/2022 12:33:53 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Cobalt | 0.0097 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Nickel | 0.0074 | 0.0053 | 0.010 | J | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Vanadium | 0.0089 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| Zinc | 0.028 | 0.0039 | 0.010 | | mg/L | 1 | 9/15/2022 1:54:36 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:50:02 PM | 70179 |
| Arsenic | 0.0072 | 0.00013 | 0.0010 | | mg/L | 1 | 9/16/2022 1:50:02 PM | 70179 |
| Lead | 0.0024 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:50:02 PM | 70179 |
| Selenium | 0.00046 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:50:02 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:10:38 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:15:00 AM

Lab ID: 2209635-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 1.7 | 0.0056 | 0.010 | | mg/L | 5 | 9/19/2022 5:52:54 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Nickel | 0.0041 | 0.0033 | 0.010 | J | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Silver | 0.0015 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Vanadium | 0.0017 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| Zinc | 0.0093 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 5:50:56 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:02:18 PM | C91078 |
| Arsenic | 0.0073 | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:02:18 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:02:18 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:02:18 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:12:48 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.35 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 10:37:00 AM | A91113 |
| Surr: BFB | 162 | 0 | 70-130 | S | %Rec | 1 | 9/16/2022 10:37:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | 16 | 0.23 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Ethylbenzene | 4.5 | 0.21 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Methyl tert-butyl ether (MTBE) | 1.1 | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,2,4-Trimethylbenzene | 45 | 0.12 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,3,5-Trimethylbenzene | 10 | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Acetone | 19 | 2.5 | 10 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Chloromethane | 1.8 | 0.41 | 3.0 | J | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Isopropylbenzene | 3.7 | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 4-Isopropyltoluene | 1.6 | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| n-Butylbenzene | 1.2 | 0.25 | 3.0 | J | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| n-Propylbenzene | 4.0 | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| sec-Butylbenzene | 1.3 | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Xylenes, Total | 8.6 | 0.37 | 1.5 | | µg/L | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Surr: 4-Bromofluorobenzene | 89.9 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Surr: Dibromofluoromethane | 97.6 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:28:00 PM | R91021 |
| Surr: Toluene-d8 | 92.1 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:28:00 PM | R91021 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/16/2022 3:04:22 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.73 | 0.016 | 0.064 | E | mg/L | 1 | 9/15/2022 5:49:05 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 5:49:05 PM | 70190 |
| Surr: DNOP | 86.2 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 5:49:05 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: 2-Fluorophenol | 40.6 | 0 | 15-84.5 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: Phenol-d5 | 33.7 | 0 | 15-67 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 46.5 | 0 | 15-108 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: Nitrobenzene-d5 | 54.5 | 0 | 16.8-112 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 53.1 | 0 | 15-101 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 61.4 | 0 | 34.4-134 | | %Rec | 1 | 9/16/2022 7:50:47 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.7 | 0.11 | 1.0 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Naphthalene | 13 | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| 1-Methylnaphthalene | 10 | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| 2-Methylnaphthalene | 9.2 | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Acenaphthene | 0.40 | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Fluorene | 0.76 | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Phenanthrene | 0.16 | 0.16 | 0.30 | J | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Anthracene | 0.32 | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 6:35:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 60.9 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 51.8 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 6:35:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 52.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 6:35:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.58 | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:35:30 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Chromium | 0.0063 | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Cobalt | 0.0094 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Vanadium | 0.023 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| Zinc | 0.013 | 0.0039 | 0.010 | | mg/L | 1 | 9/15/2022 1:57:45 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:52:29 PM | 70179 |
| Arsenic | 0.0070 | 0.00013 | 0.0010 | | mg/L | 1 | 9/16/2022 1:52:29 PM | 70179 |
| Lead | 0.0091 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:52:29 PM | 70179 |
| Selenium | 0.0026 | 0.00037 | 0.0010 | | mg/L | 1 | 9/16/2022 1:52:29 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:14:58 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:35:00 AM

Lab ID: 2209635-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.13 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Nickel | 0.0040 | 0.0033 | 0.010 | J | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Silver | 0.0040 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Vanadium | 0.0040 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| Zinc | 0.015 | 0.0032 | 0.010 | | mg/L | 1 | 9/19/2022 5:55:04 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:04:58 PM | C91078 |
| Arsenic | 0.0054 | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:04:58 PM | C91078 |
| Lead | 0.00021 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:04:58 PM | C91078 |
| Selenium | 0.00075 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:04:58 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:17:05 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 10:57:00 AM | A91113 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 10:57:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Methyl tert-butyl ether (MTBE) | 0.73 | 0.39 | 1.0 | J | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,1-Dichloroethane | 0.96 | 0.27 | 1.0 | J | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Surr: 4-Bromofluorobenzene | 86.9 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:51:00 PM | R91021 |
| Surr: Toluene-d8 | 90.0 | 0 | 70-130 | | %Rec | 1 | 9/14/2022 9:51:00 PM | R91021 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/16/2022 4:04:58 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.050 | 0.016 | 0.064 | JE | mg/L | 1 | 9/15/2022 6:12:50 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 6:12:50 PM | 70190 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 6:12:50 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: 2-Fluorophenol | 18.6 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: Phenol-d5 | 27.9 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 11.7 | 0 | 15-108 | S | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: Nitrobenzene-d5 | 64.1 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 58.3 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 72.7 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 1:47:46 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 11 | 0.11 | 1.0 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 7:23:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 66.4 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 59.7 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 7:23:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 62.4 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 7:23:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.16 | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:36:54 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Nickel | 0.0059 | 0.0053 | 0.010 | J | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Vanadium | 0.023 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| Zinc | 0.0096 | 0.0039 | 0.010 | J | mg/L | 1 | 9/15/2022 2:05:51 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:54:55 PM | 70179 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 9/16/2022 1:54:55 PM | 70179 |
| Lead | 0.0034 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:54:55 PM | 70179 |
| Selenium | 0.00088 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:54:55 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:19:13 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 9:55:00 AM

Lab ID: 2209635-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.048 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Nickel | 0.0088 | 0.0033 | 0.010 | J | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Silver | 0.0066 | 0.0013 | 0.0050 | | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Vanadium | 0.011 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| Zinc | 0.0077 | 0.0032 | 0.010 | J | mg/L | 1 | 9/19/2022 5:59:32 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:07:39 PM | C91078 |
| Arsenic | 0.00066 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:07:39 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:07:39 PM | C91078 |
| Selenium | 0.00039 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:07:39 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:21:21 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.48 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 11:16:00 AM | A91113 |
| Surr: BFB | 98.6 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:16:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.45 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Ethylbenzene | ND | 0.43 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Methyl tert-butyl ether (MTBE) | 500 | 7.9 | 20 | | µg/L | 20 | 9/15/2022 7:44:00 PM | R91060 |
| 1,2,4-Trimethylbenzene | ND | 0.24 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 1,2-Dichloroethane (EDC) | 17 | 0.51 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| cis-1,2-DCE | 2.7 | 0.78 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 1,1-Dichloroethane | 36 | 0.55 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 1,1-Dichloroethene | 40 | 0.40 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Isopropylbenzene | ND | 0.37 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| n-Propylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| sec-Butylbenzene | ND | 0.29 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| 1,1,1-Trichloroethane | 1.7 | 0.60 | 2.0 | J | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Trichloroethene (TCE) | 4.2 | 0.41 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Xylenes, Total | ND | 0.74 | 3.0 | | µg/L | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Surr: 4-Bromofluorobenzene | 87.1 | 0 | 70-130 | | %Rec | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 2 | 9/15/2022 8:07:00 PM | R91060 |
| Surr: Toluene-d8 | 90.1 | 0 | 70-130 | | %Rec | 2 | 9/15/2022 8:07:00 PM | R91060 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | 0.0057 | 0.0027 | 0.0093 | J | µg/L | 1 | 9/16/2022 5:05:06 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.26 | 0.016 | 0.064 | E | mg/L | 1 | 9/15/2022 6:36:37 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 6:36:37 PM | 70190 |
| Surr: DNOP | 97.5 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 6:36:37 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: 2-Fluorophenol | 46.0 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: Phenol-d5 | 36.0 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 46.1 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: Nitrobenzene-d5 | 61.4 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 59.7 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 69.4 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 2:29:25 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 75 | 0.11 | 1.0 | E | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 8:12:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 63.1 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 57.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 8:12:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 59.3 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 8:12:00 PM | 70174 |

NOTES:

1,4 Dioxane is E flagged because the result is above the calibration range of the curve.

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.31 | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:43:19 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Chromium | 0.014 | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Cobalt | 0.0094 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Nickel | 0.0099 | 0.0053 | 0.010 | J | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Vanadium | 0.032 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| Zinc | 0.0071 | 0.0039 | 0.010 | J | mg/L | 1 | 9/15/2022 2:08:58 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:57:22 PM | 70179 |
| Arsenic | 0.0021 | 0.00013 | 0.0010 | | mg/L | 1 | 9/16/2022 1:57:22 PM | 70179 |
| Lead | 0.0099 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:57:22 PM | 70179 |
| Selenium | 0.0026 | 0.00037 | 0.0010 | | mg/L | 1 | 9/16/2022 1:57:22 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:27:43 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.10 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Nickel | 0.0039 | 0.0033 | 0.010 | J | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Vanadium | 0.0063 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 9/19/2022 6:12:18 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:10:19 PM | C91078 |
| Arsenic | 0.00070 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:10:19 PM | C91078 |
| Lead | 0.000082 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:10:19 PM | C91078 |
| Selenium | 0.00051 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:10:19 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:29:51 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022 10:15:00 AM

Lab ID: 2209635-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Acetone | 16 | 2.5 | 10 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 2-Butanone | 12 | 2.0 | 10 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Surr: 4-Bromofluorobenzene | 89.1 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 8:53:00 PM | R91060 |
| Surr: Toluene-d8 | 89.2 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 8:53:00 PM | R91060 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.021 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 11:36:00 AM | A91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:36:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Acetone | 8.1 | 2.5 | 10 | J | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Chlorobenzene | 0.33 | 0.16 | 1.0 | J | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Surr: 4-Bromofluorobenzene | 90.1 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:03:00 PM | R91090 |
| Surr: Toluene-d8 | 89.0 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:03:00 PM | R91090 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/16/2022 5:35:10 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.058 | 0.016 | 0.064 | JE | mg/L | 1 | 9/15/2022 7:00:25 PM | 70190 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 9/15/2022 7:00:25 PM | 70190 |
| Surr: DNOP | 96.3 | 0 | 42.2-138 | | %Rec | 1 | 9/15/2022 7:00:25 PM | 70190 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: 2-Fluorophenol | 43.0 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: Phenol-d5 | 33.5 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: 2,4,6-Tribromophenol | 36.6 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: Nitrobenzene-d5 | 64.3 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 58.4 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 75.4 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 3:10:59 PM | 70174 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 2.1 | 0.11 | 1.0 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/15/2022 9:02:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 62.9 | 0 | 31.6-100 | | %Rec | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Surr: 2-Fluorobiphenyl | 58.1 | 0 | 26.7-90.1 | | %Rec | 1 | 9/15/2022 9:02:00 PM | 70174 |
| Surr: 4-Terphenyl-d14 | 65.5 | 0 | 72.3-147 | S | %Rec | 1 | 9/15/2022 9:02:00 PM | 70174 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.075 | 0.0016 | 0.0030 | | mg/L | 1 | 9/16/2022 12:44:47 PM | 70179 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Cobalt | 0.0086 | 0.0035 | 0.0060 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Vanadium | 0.0038 | 0.0035 | 0.050 | J | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/15/2022 2:11:53 PM | 70179 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/16/2022 1:59:49 PM | 70179 |
| Arsenic | 0.00081 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:59:49 PM | 70179 |
| Lead | 0.00083 | 0.000061 | 0.00050 | | mg/L | 1 | 9/16/2022 1:59:49 PM | 70179 |
| Selenium | 0.00063 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/16/2022 1:59:49 PM | 70179 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 9/20/2022 3:31:58 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-9-13-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/13/2022

Lab ID: 2209635-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.036 | 0.0011 | 0.0020 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Silver | 0.0036 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Vanadium | 0.0050 | 0.0017 | 0.050 | J | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 9/19/2022 6:16:21 PM | C91139 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:18:23 PM | C91078 |
| Arsenic | 0.00081 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:18:23 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:18:23 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:18:23 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:34:06 PM | 70278 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209635-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: CCM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Surr: 4-Bromofluorobenzene | 90.4 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 10:25:00 PM | R91060 |
| Surr: Toluene-d8 | 88.5 | 0 | 70-130 | | %Rec | 1 | 9/15/2022 10:25:00 PM | R91060 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209635

Date Reported: 10/6/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209635-009B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 9/16/2022 6:35:22 AM | 70173 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 20, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1535948

Samples Received: 09/15/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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EB-09-13-22 2209635-001F L1535948-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:00 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

MKTF-46 2209635-002F L1535948-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:01 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

MKTF-18R 2209635-003F L1535948-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:02 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

MKTF-38 2209635-004F L1535948-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:03 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

MKTF-40 2209635-005F L1535948-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:04 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

MKTF-31 2209635-006F L1535948-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:05 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

DUP-9-13-22 2209635-007F L1535948-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928511 | 1 | 09/20/22 09:12 | 09/20/22 18:06 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/20/2022 18:00 | WG1928511 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/20/2022 18:01 | WG1928511 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
ug/l | Qualifier | MDL
ug/l | RDL
ug/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/20/2022 18:02 | WG1928511 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | U | | 1.80 | 5.00 | 1 | 09/20/2022 18:03 | WG1928511 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 13.1 | | 1.80 | 5.00 | 1 | 09/20/2022 18:04 | WG1928511 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 12.4 | | 1.80 | 5.00 | 1 | 09/20/2022 18:05 | WG1928511 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|------|----------|----------------------|---------------------------|
| Cyanide | 3.06 | J | 1.80 | 5.00 | 1 | 09/20/2022 18:06 | WG1928511 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3839387-1 09/20/22 17:35

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|--------|--------|
| | ug/l | | ug/l | ug/l |
| Cyanide | U | | 1.80 | 5.00 |

L1535759-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1535759-02 09/20/22 17:50 • (DUP) R3839387-6 09/20/22 17:51

| Analyte | Original Result | DUP Result | Dilution | DUP RPD | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|----------------|
| | ug/l | ug/l | | % | % |
| Cyanide | U | U | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3839387-2 09/20/22 17:36

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| | ug/l | ug/l | % | % | |
| Cyanide | 100 | 102 | 102 | 87.1-120 | |

L1535745-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535745-02 09/20/22 17:43 • (MS) R3839387-4 09/20/22 17:44 • (MSD) R3839387-5 09/20/22 17:47

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| Cyanide | 100 | U | 105 | 104 | 105 | 104 | 1 | 90.0-110 | | | 0.957 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
|---|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

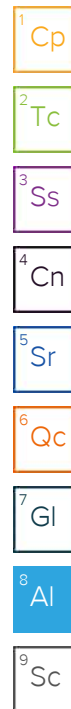
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

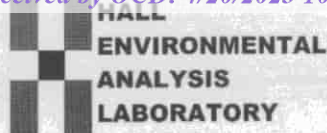
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 3416 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

B055

| | | | | | | | |
|---|--------------|-------------------------|-------------|------------------------------|-----------------------|----------------------------|-----------------------------|
| SUB-CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2209635-001F | EB-09-13-22 | 500AMBHDP | Groundw | 9/13/2022 8:00:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2209635-002F | MKTF-46 | 500AMBHDP | Groundw | 9/13/2022 8:30:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2209635-003F | MKTF-18R | 500AMBHDP | Groundw | 9/13/2022 9:15:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2209635-004F | MKTF-38 | 500AMBHDP | Groundw | 9/13/2022 9:35:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2209635-005F | MKTF-40 | 500AMBHDP | Groundw | 9/13/2022 9:55:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2209635-006F | MKTF-31 | 500AMBHDP | Groundw | 9/13/2022 10:15:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2209635-008F | DUP-9-13-22 | 500AMBHDP | Groundw | 9/13/2022 | 1 | Total Cyanide J and MDL -07 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N IF Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS/COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|------------------------|----------------------|-----------------------------|----------------------|-------------------|--|
| Relinquished By: <u>SR</u> | Date: <u>9/14/2022</u> | Time: <u>8:13 AM</u> | Received By: | Date: | Time: | REPORT TRANSMITTAL DESIRED:
☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: <u>W. Webb</u> | Date: <u>9/15/22</u> | Time: <u>9:00</u> | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

5755 2089 4009 2.1

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70179 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70179 | RunNo: 91068 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/15/2022 | SeqNo: 3257142 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0056 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70179 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70179 | RunNo: 91068 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/15/2022 | SeqNo: 3257143 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 105 | 50 | 150 | | | |
| Cadmium | 0.0016 | 0.0020 | 0.002000 | 0 | 80.1 | 50 | 150 | | | J |
| Chromium | 0.0059 | 0.0060 | 0.006000 | 0 | 98.0 | 50 | 150 | | | J |
| Cobalt | 0.0043 | 0.0060 | 0.006000 | 0 | 71.1 | 50 | 150 | | | J |
| Nickel | 0.0041 | 0.010 | 0.005000 | 0 | 82.6 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 99.0 | 50 | 150 | | | J |
| Vanadium | 0.0098 | 0.050 | 0.01000 | 0 | 98.2 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70179 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70179 | RunNo: 91068 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/15/2022 | SeqNo: 3257144 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 99.0 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.5 | 85 | 115 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 94.6 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.2 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.2 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.8 | 85 | 115 | | | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.0 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70179 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 70179 | RunNo: 91103 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258812 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70179 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 70179 | RunNo: 91103 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258813 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 92.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70179 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 70179 | RunNo: 91103 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258814 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260467 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260468 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0030 | 0.002000 | 0 | 123 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.0 | 50 | 150 | | | J |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LLLCS-C | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: C91139 | | RunNo: 91139 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260468 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 91.6 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 93.8 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 102 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: C91139 | | RunNo: 91139 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260469 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260470 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260471 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0020 | 0.002000 | 0 | 123 | 50 | 150 | | | |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 106 | 50 | 150 | | | |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 86.0 | 50 | 150 | | | J |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Cobalt | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 91.6 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 93.8 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 102 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 105 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260472 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 2209635-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-09-13-22 | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260574 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.6 | 70 | 130 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 70 | 130 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.6 | 70 | 130 | | | |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 93.6 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0.006383 | 99.9 | 70 | 130 | | | |

| Sample ID: 2209635-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: EB-09-13-22 | Batch ID: C91139 | RunNo: 91139 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260575 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.4 | 70 | 130 | 0.513 | 20 | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 99.9 | 70 | 130 | 0.898 | 20 | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 70 | 130 | 1.67 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.6 | 70 | 130 | 1.03 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.4 | 70 | 130 | 1.48 | 20 | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.1 | 70 | 130 | 1.54 | 20 | |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 94.3 | 70 | 130 | 0.773 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.9 | 70 | 130 | 0.817 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0.006383 | 98.1 | 70 | 130 | 1.75 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-70179 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 70179 | RunNo: 91098 |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258655 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|---------------------------------|---------------------------------|--|
| Sample ID: MSLCSLL-70179 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 70179 | RunNo: 91098 |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258656 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0011 | 0.0010 0.001000 0 110 50 150 |
| Arsenic | 0.0010 | 0.0010 0.001000 0 101 50 150 |
| Lead | 0.00051 | 0.00050 0.0005000 0 101 50 150 |
| Selenium | 0.0011 | 0.0010 0.001000 0 108 50 150 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: MSLCS-70179 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 70179 | RunNo: 91098 |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258657 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.025 | 0.0010 0.02500 0 99.4 85 115 |
| Arsenic | 0.024 | 0.0010 0.02500 0 97.5 85 115 |
| Lead | 0.012 | 0.00050 0.01250 0 97.0 85 115 |
| Selenium | 0.024 | 0.0010 0.02500 0 95.0 85 115 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2209635-008DMSLL | SampType: MS | TestCode: EPA 200.8: Metals |
| Client ID: DUP-9-13-22 | Batch ID: 70179 | RunNo: 91098 |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258698 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.025 | 0.0010 0.02500 0 98.9 70 130 |
| Arsenic | 0.026 | 0.0010 0.02500 0.0008119 99.3 70 130 |
| Lead | 0.012 | 0.00050 0.01250 0.0008328 91.9 70 130 |
| Selenium | 0.023 | 0.0010 0.02500 0.0006328 89.9 70 130 |

| | | |
|------------------------------------|---------------------------------|--|
| Sample ID: 2209635-008DMSDL | SampType: MSD | TestCode: EPA 200.8: Metals |
| Client ID: DUP-9-13-22 | Batch ID: 70179 | RunNo: 91098 |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258699 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|-------|----------|------|
| Sample ID: 2209635-008DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP-9-13-22 | | Batch ID: 70179 | | RunNo: 91098 | | | | | | |
| Prep Date: 9/14/2022 | | Analysis Date: 9/16/2022 | | SeqNo: 3258699 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | 2.24 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0008119 | 99.9 | 70 | 130 | 0.608 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0008328 | 92.9 | 70 | 130 | 0.982 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0.0006328 | 98.7 | 70 | 130 | 9.13 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257887 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257889 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00083 | 0.0010 | 0.001000 | 0 | 83.2 | 50 | 150 | | | J |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.5 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.0 | 50 | 150 | | | J |
| Selenium | 0.00062 | 0.0010 | 0.001000 | 0 | 62.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257891 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.2 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.7 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70278 | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: PBW | Batch ID: 70278 | | RunNo: 91165 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | | SeqNo: 3261769 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00012 | 0.00020 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-70278 | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | Batch ID: 70278 | | RunNo: 91165 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | | SeqNo: 3261770 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00017 | 0.00020 | 0.0001500 | 0 | 115 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70278 | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: LCSW | Batch ID: 70278 | | RunNo: 91165 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | | SeqNo: 3261771 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258444 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-70173 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258445 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-70173 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258447 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.088 | 0.010 | 0.1000 | 0 | 87.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70173 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | SeqNo: 3258448 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 | 0.1000 | 0 | 93.6 | 70 | 130 | 6.28 | 20 | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209635-001BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: EB-09-13-22 | Batch ID: 70173 | RunNo: 91063 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/16/2022 | SeqNo: 3258460 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.089 | 0.0095 | 0.09485 | 0 | 93.8 | 65 | 135 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70190 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70190 | | RunNo: 91074 | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | | SeqNo: 3257375 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.030 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.039 | | 0.03750 | | 103 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70190 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70190 | | RunNo: 91074 | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | | SeqNo: 3257376 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.17 | 0.064 | 0.1875 | 0 | 89.3 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70190 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70190 | | RunNo: 91074 | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/15/2022 | | SeqNo: 3257377 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.13 | 0.064 | 0.1875 | 0 | 69.3 | 31.7 | 75.4 | 25.3 | 20 | R |
| Surr: DNOP | 0.018 | | 0.01875 | | 98.2 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259450 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 210 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259451 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 97.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209635-002a ms | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-46 | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259472 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0.02460 | 97.5 | 70 | 130 | | | |
| Surr: BFB | 43 | | 20.00 | | 215 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2209635-002A MSD | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-46 | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259473 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0.02460 | 92.4 | 70 | 130 | 5.13 | 20 | |
| Surr: BFB | 41 | | 20.00 | | 204 | 70 | 130 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R91021 | | RunNo: 91021 | | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | SeqNo: 3255741 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 97.8 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.4 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 97.0 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 92.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.3 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.1 | | 10.00 | | 90.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91021 | | RunNo: 91021 | | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | | SeqNo: 3255742 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R91021 | RunNo: 91021 | | | | | | | | |
| Prep Date: | Analysis Date: 9/14/2022 | SeqNo: 3255742 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.1 | | 10.00 | | 91.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.8 | | 10.00 | | 88.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R91060 | RunNo: 91060 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257050 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 96.6 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 94.7 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 97.4 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.2 | | 10.00 | | 92.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 89.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R91060 | RunNo: 91060 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3258173 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91060 | | | RunNo: 91060 | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | | | SeqNo: 3258173 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.8 | | 10.00 | | 87.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.3 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R91090 | | | RunNo: 91090 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3258469 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 95.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 98.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.0 | | 10.00 | | 90.3 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.1 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91090 | | | RunNo: 91090 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3259688 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.8 | | 10.00 | | 87.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.9 | | 10.00 | | 89.0 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70174 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70174 | RunNo: 91112 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3259515 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 50 | | 200.0 | | 24.9 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 38 | | 200.0 | | 18.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 67 | | 200.0 | | 33.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 31 | | 100.0 | | 30.6 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 30 | | 100.0 | | 29.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 57 | | 100.0 | | 57.2 | 34.4 | 134 | | | |

| Sample ID: LCS-70174 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70174 | RunNo: 91112 | | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | SeqNo: 3259516 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70174 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70174 | | RunNo: 91112 | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | | SeqNo: 3259516 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 54 | 10 | 100.0 | 0 | 53.9 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 48 | 5.0 | 100.0 | 0 | 48.5 | 15 | 89.8 | | | |
| Phenol | 71 | 20 | 200.0 | 0 | 35.5 | 17 | 61.1 | | | |
| Pyrene | 74 | 10 | 100.0 | 0 | 74.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 80 | | 200.0 | | 40.1 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 63 | | 200.0 | | 31.6 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 57.7 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 73 | | 100.0 | | 73.4 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: LCSD-70174 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70174 | | RunNo: 91112 | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/16/2022 | | SeqNo: 3259517 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 62 | 10 | 100.0 | 0 | 62.4 | 21.3 | 104 | 14.6 | 45.3 | |
| 1,4-Dichlorobenzene | 57 | 5.0 | 100.0 | 0 | 56.5 | 15 | 89.8 | 15.3 | 39.6 | |
| Phenol | 79 | 20 | 200.0 | 0 | 39.3 | 17 | 61.1 | 10.2 | 42.5 | |
| Pyrene | 74 | 10 | 100.0 | 0 | 74.3 | 61 | 123 | 0.179 | 11.8 | |
| Surr: 2-Fluorophenol | 96 | | 200.0 | | 48.0 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 74 | | 200.0 | | 37.1 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.6 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 66.3 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 61.8 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 75 | | 100.0 | | 75.2 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70174 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70174 | | RunNo: 91075 | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/15/2022 | | SeqNo: 3257245 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 32 | | 100.0 | | 32.3 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 54 | | 200.0 | | 27.1 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 35 | | 100.0 | | 34.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 67 | | 100.0 | | 67.4 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70174-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70174 | | RunNo: 91075 | | | | | | | |
| Prep Date: 9/14/2022 | Analysis Date: 9/15/2022 | | SeqNo: 3257246 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.60 | 0.10 | 2.000 | 0 | 30.0 | 20.2 | 48.4 | | | |
| Naphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 21.3 | 79.9 | | | |
| 1-Methylnaphthalene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 22.2 | 80.3 | | | |
| 2-Methylnaphthalene | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 20.6 | 80.1 | | | |
| Acenaphthene | 0.86 | 0.30 | 2.000 | 0 | 43.0 | 29.8 | 82.7 | | | |
| Fluorene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 33.3 | 86 | | | |
| Phenanthrene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 38.2 | 93.9 | | | |
| Anthracene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 41.1 | 95.6 | | | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 52.9 | 123 | | | |
| Pyrene | 1.2 | 1.0 | 2.000 | 0 | 62.0 | 51 | 113 | | | |
| Benz(a)anthracene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 51 | 147 | | | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 55.3 | 115 | | | |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 44.4 | 136 | | | |
| Indeno(1,2,3-cd)pyrene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 31.4 | 165 | | | |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 52.5 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209635

06-Oct-22

Client: Marathon

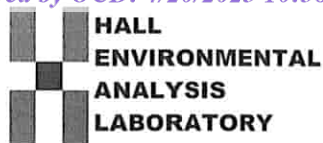
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70174-If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70174 | | | RunNo: 91075 | | | | | |
| Prep Date: 9/14/2022 | | Analysis Date: 9/15/2022 | | | SeqNo: 3257246 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 67 | | 200.0 | | 33.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 52.6 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 60 | | 100.0 | | 59.8 | 72.3 | 147 | | | S |

| Sample ID: Icsd-70174-If | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | | Batch ID: 70174 | | | RunNo: 91075 | | | | | |
| Prep Date: 9/14/2022 | | Analysis Date: 9/15/2022 | | | SeqNo: 3257247 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.76 | 0.10 | 2.000 | 0 | 38.0 | 20.2 | 48.4 | 23.5 | 30.1 | |
| Naphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 21.3 | 79.9 | 2.60 | 25.6 | |
| 1-Methylnaphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 22.2 | 80.3 | 7.79 | 25 | |
| 2-Methylnaphthalene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 20.6 | 80.1 | 8.00 | 25 | |
| Acenaphthene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 29.8 | 82.7 | 11.0 | 27.8 | |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 33.3 | 86 | 18.2 | 26.4 | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 38.2 | 93.9 | 14.0 | 27.9 | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 41.1 | 95.6 | 9.01 | 25.6 | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 52.9 | 123 | 0 | 22.8 | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 63.0 | 51 | 113 | 1.60 | 20 | |
| Benz(a)anthracene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 51 | 147 | 1.55 | 24.1 | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 55.3 | 115 | 3.13 | 20 | |
| Benzo(b)fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 44.4 | 136 | 4.72 | 24.5 | |
| Indeno(1,2,3-cd)pyrene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 31.4 | 165 | 0 | 21.1 | |
| Surr: Nitrobenzene-d5 | 65 | | 100.0 | | 64.7 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.7 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 63.7 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 69 | | 100.0 | | 69.5 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209635

RcptNo: 1

Received By: Juan Rojas 9/14/2022 7:40:00 AM

Completed By: Sean Livingston 9/14/2022 7:56:43 AM

Reviewed By: KPG a.14.22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 147
(<2 or >12 unless noted)

Adjusted? NOChecked by: ma 9/14/22Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.7 | Good | | | | |
| 2 | 0.8 | Good | | | | |
| 3 | 0.9 | Good | | | | |
| 4 | 0.4 | Good | | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209730

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 12 sample(s) on 9/15/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209730
Date: 10/4/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:
Naphthalene and 1-Methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample NAPI-2

Analytical Notes Regarding EPA Method 8015DRO:
The LCS had slightly elevated recovery

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 11:56:00 AM | A91113 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:56:00 AM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:00:28 PM | R91115 |
| Surr: Toluene-d8 | 99.6 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:00:28 PM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/19/2022 8:36:53 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.71 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 12:58:06 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.89 | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 12:58:06 PM | 70201 |
| Surr: DNOP | 91.5 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 12:58:06 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: 2-Fluorophenol | 54.6 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: Phenol-d5 | 41.8 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 66.9 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: Nitrobenzene-d5 | 73.4 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 68.9 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 82.1 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 6:39:28 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 10:51:00 AM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 67.7 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Surr: 2-Fluorobiphenyl | 63.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 10:51:00 AM | 70216 |
| Surr: 4-Terphenyl-d14 | 74.1 | 0 | 72.3-147 | | %Rec | 1 | 9/21/2022 10:51:00 AM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| Zinc | 0.0052 | 0.0039 | 0.010 | J | mg/L | 1 | 9/19/2022 11:35:23 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:00:18 PM | 70240 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:00:18 PM | 70240 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:00:18 PM | 70240 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:00:18 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:44:52 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 8:30:00 AM

Lab ID: 2209730-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:13:05 PM | A91392 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| Zinc | 0.0069 | 0.0032 | 0.010 | J | mg/L | 1 | 9/27/2022 2:49:12 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:21:03 PM | C91078 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:21:03 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:21:03 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:21:03 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:55:31 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.030 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 12:15:00 PM | A91113 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 12:15:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Methyl tert-butyl ether (MTBE) | 33 | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,1-Dichloroethane | 1.6 | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 98.8 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Surr: 4-Bromofluorobenzene | 107 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:29:03 PM | R91115 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 9:29:03 PM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/19/2022 9:07:30 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 1:21:55 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.068 | 0.052 | 0.080 | J | mg/L | 1 | 9/23/2022 1:21:55 PM | 70201 |
| Surr: DNOP | 94.3 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 1:21:55 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: 2-Fluorophenol | 39.5 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: Phenol-d5 | 30.8 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 59.1 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: Nitrobenzene-d5 | 53.4 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 49.8 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 74.5 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 7:21:40 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 5.0 | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 11:35:00 AM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 48.1 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Surr: 2-Fluorobiphenyl | 47.6 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 11:35:00 AM | 70216 |
| Surr: 4-Terphenyl-d14 | 60.2 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 11:35:00 AM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.18 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Cobalt | 0.011 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Nickel | 0.029 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| Zinc | 0.0040 | 0.0039 | 0.010 | J | mg/L | 1 | 9/19/2022 11:38:44 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:02:44 PM | 70240 |
| Arsenic | 0.0011 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:02:44 PM | 70240 |
| Lead | 0.0032 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:02:44 PM | 70240 |
| Selenium | 0.0011 | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:02:44 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:57:40 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:00:00 AM

Lab ID: 2209730-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.059 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Nickel | 0.032 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Silver | 0.0043 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:15:15 PM | A91392 |
| Vanadium | 0.0038 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 2:53:29 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:23:44 PM | C91078 |
| Arsenic | 0.00042 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:23:44 PM | C91078 |
| Lead | 0.000093 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:23:44 PM | C91078 |
| Selenium | 0.00051 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:23:44 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 3:59:48 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:45:00 AM

Lab ID: 2209730-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 12:35:00 PM | A91113 |
| Surr: BFB | 98.0 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 12:35:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Methyl tert-butyl ether (MTBE) | 1.6 | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Surr: Dibromofluoromethane | 114 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:51:46 PM | R91115 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 11:51:46 PM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209730-003B

Client Sample ID: MKTF-28

Collection Date: 9/14/2022 9:45:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/19/2022 9:38:05 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:45:00 AM

Lab ID: 2209730-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.16 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 1:45:47 PM | 70201 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 1:45:47 PM | 70201 |
| Surr: DNOP | 52.5 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 1:45:47 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: 2-Fluorophenol | 33.5 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: Phenol-d5 | 25.5 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 53.6 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: Nitrobenzene-d5 | 47.7 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 42.9 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 68.6 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 8:04:02 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.36 | 0.11 | 1.0 | J | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 12:20:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:45:00 AM

Lab ID: 2209730-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 43.6 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 42.8 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 12:20:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 55.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 12:20:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:45:00 AM

Lab ID: 2209730-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Vanadium | 0.034 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| Zinc | 0.024 | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 11:41:55 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:10:04 PM | 70240 |
| Arsenic | 0.0040 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:10:04 PM | 70240 |
| Lead | 0.011 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:10:04 PM | 70240 |
| Selenium | 0.0026 | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:10:04 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:01:56 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 9:45:00 AM

Lab ID: 2209730-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.073 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Nickel | 0.0050 | 0.0033 | 0.010 | J | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:17:29 PM | A91392 |
| Vanadium | 0.0064 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| Zinc | 0.043 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 2:57:42 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00077 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:26:24 PM | C91078 |
| Arsenic | 0.00093 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:26:24 PM | C91078 |
| Lead | 0.00014 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:26:24 PM | C91078 |
| Selenium | 0.00044 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:26:24 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:04:04 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.020 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 12:55:00 PM | A91113 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 12:55:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 22 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,1-Dichloroethane | 0.90 | 0.27 | 1.0 | J | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Surr: Dibromofluoromethane | 117 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:20:23 AM | R91115 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:20:23 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/19/2022 10:08:44 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 1.2 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 2:09:37 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.84 | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 2:09:37 PM | 70201 |
| Surr: DNOP | 97.8 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 2:09:37 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: 2-Fluorophenol | 52.7 | 0 | 15-84.5 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: Phenol-d5 | 39.9 | 0 | 15-67 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 61.0 | 0 | 15-108 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: Nitrobenzene-d5 | 72.6 | 0 | 16.8-112 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 63.8 | 0 | 15-101 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 82.3 | 0 | 34.4-134 | | %Rec | 1 | 9/22/2022 8:46:17 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 4.6 | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 1:04:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 64.7 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 59.0 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 1:04:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 62.2 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 1:04:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.30 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Cobalt | 0.022 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Nickel | 0.015 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Silver | 0.0026 | 0.0018 | 0.0050 | J | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Vanadium | 0.011 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 11:49:56 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:12:31 PM | 70240 |
| Arsenic | 0.00094 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:12:31 PM | 70240 |
| Lead | 0.00062 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:12:31 PM | 70240 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:12:31 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:06:13 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:10:00 AM

Lab ID: 2209730-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.20 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Nickel | 0.018 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Silver | 0.0077 | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:19:36 PM | A91392 |
| Vanadium | 0.0083 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 3:10:02 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:29:04 PM | C91078 |
| Arsenic | 0.00078 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:29:04 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:29:04 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:29:04 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:08:22 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.028 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 1:14:00 PM | A91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 1:14:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 6.6 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,2-Dichloroethane (EDC) | 1.1 | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| cis-1,2-DCE | 1.9 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,1-Dichloroethane | 21 | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,1-Dichloroethene | 1.4 | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Trichloroethene (TCE) | 1.2 | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Surr: Dibromofluoromethane | 120 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:49:02 AM | R91115 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 12:49:02 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/19/2022 10:39:21 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.15 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 2:33:28 PM | 70201 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 2:33:28 PM | 70201 |
| Surr: DNOP | 101 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 2:33:28 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: 2-Fluorophenol | 37.3 | 0 | 15-84.5 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: Phenol-d5 | 29.8 | 0 | 15-67 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: 2,4,6-Tribromophenol | 47.2 | 0 | 15-108 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: Nitrobenzene-d5 | 50.9 | 0 | 16.8-112 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: 2-Fluorobiphenyl | 47.8 | 0 | 15-101 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| Surr: 4-Terphenyl-d14 | 70.9 | 0 | 34.4-134 | | %Rec | 1 | 9/23/2022 10:04:31 AM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 12 | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 1:48:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 47.2 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 45.4 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 1:48:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 58.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 1:48:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.16 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Cobalt | 0.0092 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Nickel | 0.014 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Vanadium | 0.021 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 11:53:18 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:14:57 PM | 70240 |
| Arsenic | 0.0012 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:14:57 PM | 70240 |
| Lead | 0.0036 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:14:57 PM | 70240 |
| Selenium | 0.00053 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:14:57 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:10:31 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:30:00 AM

Lab ID: 2209730-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.036 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Nickel | 0.018 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Silver | 0.0022 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:21:53 PM | A91392 |
| Vanadium | 0.0046 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| Zinc | 0.0090 | 0.0032 | 0.010 | J | mg/L | 1 | 9/27/2022 3:14:29 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:31:45 PM | C91078 |
| Arsenic | 0.00060 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:31:45 PM | C91078 |
| Lead | 0.000098 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:31:45 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:31:45 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:12:41 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.34 | 0.045 | 0.25 | | mg/L | 5 | 9/16/2022 1:34:00 PM | A91113 |
| Surr: BFB | 114 | 0 | 70-130 | | %Rec | 5 | 9/16/2022 1:34:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 24 | 1.1 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Ethylbenzene | 4.6 | 1.1 | 5.0 | J | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 300 | 2.0 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 5 | 9/17/2022 1:17:41 AM | R91115 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 5 | 9/17/2022 1:17:41 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/19/2022 11:25:10 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 7.3 | 0.080 | 0.32 | | mg/L | 5 | 9/23/2022 2:57:16 PM | 70201 |
| Motor Oil Range Organics (MRO) | 1.0 | 0.26 | 0.40 | | mg/L | 5 | 9/23/2022 2:57:16 PM | 70201 |
| Surr: DNOP | 98.8 | 0 | 42.2-138 | | %Rec | 5 | 9/23/2022 2:57:16 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 16.8-112 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 15-101 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 34.4-134 | SD | %Rec | 10 | 9/23/2022 10:45:51 AM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 1.1 | 10 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Chrysene | ND | 2.5 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 9/21/2022 2:33:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 0 | 0 | 31.6-100 | SD | %Rec | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 26.7-90.1 | SD | %Rec | 10 | 9/21/2022 2:33:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 72.3-147 | SD | %Rec | 10 | 9/21/2022 2:33:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.93 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Chromium | 0.0023 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Cobalt | 0.019 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Nickel | 0.17 | 0.0053 | 0.010 | * | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Vanadium | 0.041 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| Zinc | 0.0068 | 0.0039 | 0.010 | J | mg/L | 1 | 9/19/2022 11:56:27 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:55:11 PM | 70240 |
| Arsenic | 0.0050 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:55:11 PM | 70240 |
| Lead | 0.0060 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:55:11 PM | 70240 |
| Selenium | 0.0012 | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:55:11 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:19:05 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 10:50:00 AM

Lab ID: 2209730-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.82 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Cobalt | 0.0048 | 0.0024 | 0.0060 | J | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Nickel | 0.17 | 0.0033 | 0.010 | * | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Silver | 0.0025 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:24:00 PM | A91392 |
| Vanadium | 0.029 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| Zinc | 0.023 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 3:18:33 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:34:25 PM | C91078 |
| Arsenic | 0.0050 | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:34:25 PM | C91078 |
| Lead | 0.0050 | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:34:25 PM | C91078 |
| Selenium | 0.0012 | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:34:25 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:21:13 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 4.1 | 0.090 | 0.50 | | mg/L | 10 | 9/16/2022 1:54:00 PM | A91113 |
| Surr: BFB | 131 | 0 | 70-130 | S | %Rec | 10 | 9/16/2022 1:54:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1200 | 4.5 | 20 | | µg/L | 20 | 9/17/2022 1:46:14 AM | R91115 |
| Toluene | 0.62 | 0.40 | 2.0 | J | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Ethylbenzene | 200 | 0.43 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 110 | 0.79 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,2,4-Trimethylbenzene | 2.2 | 0.24 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.51 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| cis-1,2-DCE | ND | 0.78 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,1-Dichloroethane | ND | 0.55 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.40 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Isopropylbenzene | 15 | 0.37 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| n-Butylbenzene | 1.2 | 0.51 | 6.0 | J | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| n-Propylbenzene | 14 | 0.36 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| sec-Butylbenzene | 2.3 | 0.29 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Xylenes, Total | 26 | 0.74 | 3.0 | | µg/L | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 90.7 | 0 | 70-130 | | %Rec | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 92.9 | 0 | 70-130 | | %Rec | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Surr: Dibromofluoromethane | 99.5 | 0 | 70-130 | | %Rec | 2 | 9/17/2022 2:14:40 AM | R91115 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 2 | 9/17/2022 2:14:40 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/19/2022 11:55:46 PM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.7 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 3:44:49 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.14 | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 3:44:49 PM | 70201 |
| Surr: DNOP | 87.9 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 3:44:49 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 1-Methylnaphthalene | 44 | 4.3 | 5.0 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Naphthalene | 25 | 3.2 | 5.0 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Phenol | 27 | 18 | 20 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: 2-Fluorophenol | 41.5 | 0 | 15-84.5 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: Phenol-d5 | 33.0 | 0 | 15-67 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: 2,4,6-Tribromophenol | 58.2 | 0 | 15-108 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: Nitrobenzene-d5 | 58.8 | 0 | 16.8-112 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: 2-Fluorobiphenyl | 55.4 | 0 | 15-101 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| Surr: 4-Terphenyl-d14 | 72.3 | 0 | 34.4-134 | | %Rec | 1 | 9/23/2022 11:27:16 AM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.6 | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| 2-Methylnaphthalene | 16 | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Acenaphthene | 2.7 | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Fluorene | 3.2 | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Phenanthrene | 0.92 | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Anthracene | 0.30 | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 3:17:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 52.5 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 45.0 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 3:17:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 50.8 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 3:17:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 5.2 | 0.016 | 0.030 | * | mg/L | 10 | 9/19/2022 3:20:30 PM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Cobalt | 0.011 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Nickel | 0.084 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Vanadium | 0.0092 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 11:59:42 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:19:50 PM | 70240 |
| Arsenic | 0.0031 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:19:50 PM | 70240 |
| Lead | 0.0026 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:19:50 PM | 70240 |
| Selenium | 0.00063 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:19:50 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:23:22 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:20:00 AM

Lab ID: 2209730-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 4.9 | 0.0056 | 0.010 | * | mg/L | 5 | 9/27/2022 3:24:43 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Nickel | 0.068 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Silver | 0.0026 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:26:01 PM | A91392 |
| Vanadium | 0.0042 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| Zinc | 0.0096 | 0.0032 | 0.010 | J | mg/L | 1 | 9/27/2022 3:22:44 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:37:06 PM | C91078 |
| Arsenic | 0.0018 | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:37:06 PM | C91078 |
| Lead | 0.00032 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:37:06 PM | C91078 |
| Selenium | 0.00053 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:37:06 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:25:30 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.47 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 2:14:00 PM | A91113 |
| Surr: BFB | 201 | 0 | 70-130 | S | %Rec | 1 | 9/16/2022 2:14:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 90 | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Ethylbenzene | 29 | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 62 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Isopropylbenzene | 3.3 | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| n-Propylbenzene | 1.8 | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| sec-Butylbenzene | 0.73 | 0.14 | 1.0 | J | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Xylenes, Total | 1.2 | 0.37 | 1.5 | J | µg/L | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 97.2 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 2:43:06 AM | R91115 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 2:43:06 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/20/2022 12:26:14 AM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.86 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 4:08:40 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.086 | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 4:08:40 PM | 70201 |
| Surr: DNOP | 95.7 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 4:08:40 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: 2-Fluorophenol | 50.3 | 0 | 15-84.5 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: Phenol-d5 | 40.0 | 0 | 15-67 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 61.8 | 0 | 15-108 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: Nitrobenzene-d5 | 66.9 | 0 | 16.8-112 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 63.3 | 0 | 15-101 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 78.6 | 0 | 34.4-134 | | %Rec | 1 | 9/23/2022 12:08:50 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.74 | 0.11 | 1.0 | J | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Naphthalene | 1.3 | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| 1-Methylnaphthalene | 1.9 | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| 2-Methylnaphthalene | 0.70 | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Acenaphthene | 0.62 | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Fluorene | 0.24 | 0.095 | 0.30 | J | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Anthracene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 4:01:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 60.8 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 52.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 4:01:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 54.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 4:01:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.3 | 0.0079 | 0.015 | * | mg/L | 5 | 9/19/2022 12:10:39 PM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Nickel | 0.022 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Vanadium | 0.0041 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 12:02:49 PM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:22:17 PM | 70240 |
| Arsenic | 0.0041 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:22:17 PM | 70240 |
| Lead | 0.00075 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:22:17 PM | 70240 |
| Selenium | 0.00054 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:22:17 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:27:39 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 11:45:00 AM

Lab ID: 2209730-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.3 | 0.0056 | 0.010 | * | mg/L | 5 | 9/27/2022 3:28:47 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Silver | 0.0028 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:28:02 PM | A91392 |
| Vanadium | 0.0023 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| Zinc | 0.012 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 3:26:40 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:39:47 PM | C91078 |
| Arsenic | 0.0017 | 0.00012 | 0.0010 | | mg/L | 1 | 9/15/2022 5:39:47 PM | C91078 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/15/2022 5:39:47 PM | C91078 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:39:47 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:29:48 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.12 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 2:33:00 PM | A91113 |
| Surr: BFB | 147 | 0 | 70-130 | S | %Rec | 1 | 9/16/2022 2:33:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Ethylbenzene | 0.31 | 0.21 | 1.0 | J | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 68 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:11:31 AM | R91115 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:11:31 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/20/2022 12:56:47 AM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.61 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 4:32:23 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | | mg/L | 1 | 9/23/2022 4:32:23 PM | 70201 |
| Surr: DNOP | 95.0 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 4:32:23 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: 2-Fluorophenol | 37.7 | 0 | 15-84.5 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: Phenol-d5 | 30.2 | 0 | 15-67 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 53.5 | 0 | 15-108 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: Nitrobenzene-d5 | 50.8 | 0 | 16.8-112 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 48.4 | 0 | 15-101 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 64.0 | 0 | 34.4-134 | | %Rec | 1 | 9/23/2022 12:50:16 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.48 | 0.11 | 1.0 | J | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 4:45:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 48.4 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 42.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 4:45:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 48.3 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 4:45:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.22 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Cobalt | 0.0085 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Nickel | 0.020 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Vanadium | 0.019 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 12:12:20 PM | 70240 |
| Zinc | 0.0089 | 0.0039 | 0.010 | J | mg/L | 1 | 9/23/2022 11:03:48 AM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:24:43 PM | 70240 |
| Arsenic | 0.00071 | 0.00013 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:24:43 PM | 70240 |
| Lead | 0.00067 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:24:43 PM | 70240 |
| Selenium | 0.00080 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/19/2022 3:24:43 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:31:56 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.21 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:30:09 PM | A91392 |
| Vanadium | 0.015 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| Zinc | 0.032 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 3:45:04 PM | B91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:42:28 PM | C91078 |
| Arsenic | 0.00067 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:42:28 PM | C91078 |
| Lead | 0.00021 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:42:28 PM | C91078 |
| Selenium | 0.0014 | 0.00034 | 0.0010 | | mg/L | 1 | 9/15/2022 5:42:28 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:34:04 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.032 | 0.0090 | 0.050 | J | mg/L | 1 | 9/16/2022 2:53:00 PM | A91113 |
| Surr: BFB | 102 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 2:53:00 PM | A91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | 33 | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,1-Dichloroethane | 1.6 | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:40:08 AM | R91115 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 3:40:08 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/20/2022 1:27:14 AM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.21 | 0.016 | 0.064 | | mg/L | 1 | 9/23/2022 4:56:05 PM | 70201 |
| Motor Oil Range Organics (MRO) | 0.061 | 0.052 | 0.080 | J | mg/L | 1 | 9/23/2022 4:56:05 PM | 70201 |
| Surr: DNOP | 103 | 0 | 42.2-138 | | %Rec | 1 | 9/23/2022 4:56:05 PM | 70201 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: 2-Fluorophenol | 41.9 | 0 | 15-84.5 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: Phenol-d5 | 35.8 | 0 | 15-67 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: 2,4,6-Tribromophenol | 46.6 | 0 | 15-108 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: Nitrobenzene-d5 | 56.6 | 0 | 16.8-112 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 58.7 | 0 | 15-101 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 73.8 | 0 | 34.4-134 | | %Rec | 1 | 9/23/2022 1:31:30 PM | 70216 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 5.7 | 0.11 | 1.0 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/21/2022 5:29:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 54.4 | 0 | 31.6-100 | | %Rec | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Surr: 2-Fluorobiphenyl | 50.4 | 0 | 26.7-90.1 | | %Rec | 1 | 9/21/2022 5:29:00 PM | 70216 |
| Surr: 4-Terphenyl-d14 | 56.4 | 0 | 72.3-147 | S | %Rec | 1 | 9/21/2022 5:29:00 PM | 70216 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.17 | 0.0016 | 0.0030 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Cobalt | 0.015 | 0.0035 | 0.0060 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Nickel | 0.029 | 0.0053 | 0.010 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/19/2022 12:15:38 PM | 70240 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 3:32:03 PM | 70240 |
| Arsenic | 0.0013 | 0.00013 | 0.0010 | | mg/L | 1 | 9/19/2022 3:32:03 PM | 70240 |
| Lead | 0.0029 | 0.000061 | 0.00050 | | mg/L | 1 | 9/19/2022 3:32:03 PM | 70240 |
| Selenium | 0.0014 | 0.00037 | 0.0010 | | mg/L | 1 | 9/19/2022 3:32:03 PM | 70240 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:36:13 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022

Lab ID: 2209730-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.058 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Nickel | 0.033 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Silver | 0.0040 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:40:23 PM | A91392 |
| Vanadium | 0.0048 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| Zinc | 0.010 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 3:49:13 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/15/2022 5:55:54 PM | C91078 |
| Arsenic | 0.00049 | 0.00012 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:55:54 PM | C91078 |
| Lead | 0.000080 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/15/2022 5:55:54 PM | C91078 |
| Selenium | 0.00094 | 0.00034 | 0.0010 | J | mg/L | 1 | 9/15/2022 5:55:54 PM | C91078 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/20/2022 4:38:22 PM | 70279 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-14-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/14/2022 12:10:00 PM

Lab ID: 2209730-011A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Acetone | 59 | 2.5 | 10 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 2-Butanone | 12 | 2.0 | 10 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:08:43 AM | R91115 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:08:43 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209730-012A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:37:13 AM | R91115 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 9/17/2022 4:37:13 AM | R91115 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209730

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209730-012B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/20/2022 1:57:41 AM | 70247 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 23, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1536827

Samples Received: 09/16/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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2209730-001F EB-09-14-22 L1536827-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928522 | 1 | 09/21/22 02:19 | 09/22/22 21:47 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

2209730-0002F MKTF-27 L1536827-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:47 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-003F MKTF-28 L1536827-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:52 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-004F MKTF-29 L1536827-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:53 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-005F MKTF-30 L1536827-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:54 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-006F OPIS-1 L1536827-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:55 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-007F NAPI-2 L1536827-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:56 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2209730-008F NAPI-3 L1536827-08 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:57 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

SAMPLE SUMMARY

2209730-009F KA-3 L1536827-09 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:58 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2209730-010F DUP 9-14-22 L1536827-10 GW

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1928523 | 1 | 09/22/22 02:31 | 09/23/22 00:59 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/22/2022 21:47 | WG1928522 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 0.00799 | | 0.00500 | 1 | 09/23/2022 00:47 | WG1928523 |

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 00:52 | WG1928523 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/14/22 10:10

L1536827

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00602 | | 0.00500 | 1 | 09/23/2022 00:53 | WG1928523 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 00:54 | WG1928523 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/14/22 10:50

L1536827

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0429 | | 0.00500 | 1 | 09/23/2022 00:55 | WG1928523 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0171 | | 0.00500 | 1 | 09/23/2022 00:56 | WG1928523 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00856 | | 0.00500 | 1 | 09/23/2022 00:57 | WG1928523 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0114 | | 0.00500 | 1 | 09/23/2022 00:58 | WG1928523 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00901 | | 0.00500 | 1 | 09/23/2022 00:59 | WG1928523 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1536827-01

Method Blank (MB)

(MB) R3840466-1 09/22/22 21:15

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1535396-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1535396-04 09/22/22 21:19 • (DUP) R3840466-3 09/22/22 21:20

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1536174-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1536174-01 09/22/22 21:51 • (DUP) R3840466-8 09/22/22 21:52

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 2.88 | 3.06 | 20 | 6.06 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3840466-2 09/22/22 21:16

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0965 | 96.5 | 87.1-120 | |

L1535656-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1535656-01 09/22/22 21:21 • (MS) R3840466-4 09/22/22 21:22 • (MSD) R3840466-5 09/22/22 21:23

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0951 | 0.0952 | 95.1 | 95.2 | 1 | 90.0-110 | | | 0.105 | 20 |

L1536174-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1536174-13 09/22/22 21:31 • (MS) R3840466-6 09/22/22 21:32 • (MSD) R3840466-7 09/22/22 21:33

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.518 | 0.605 | 0.509 | 87.0 | 0.000 | 1 | 90.0-110 | EV | EV | 17.2 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1536174-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1536174-13 09/22/22 21:31 • (MS) R3840466-6 09/22/22 21:32 • (MSD) R3840466-7 09/22/22 21:33

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-----|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |

Sample Narrative:

MS: Matrix spike failure due to matrix interference.

MSD: Matrix spike failure due to matrix interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3840481-1 09/23/22 00:26

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1536428-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1536428-02 09/23/22 00:31 • (DUP) R3840481-3 09/23/22 00:32

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1536482-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1536482-02 09/23/22 00:39 • (DUP) R3840481-6 09/23/22 00:40

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3840481-2 09/23/22 00:27

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0959 | 95.9 | 87.1-120 | |

L1536480-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1536480-02 09/23/22 00:33 • (MS) R3840481-4 09/23/22 00:34 • (MSD) R3840481-5 09/23/22 00:35

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0919 | 0.0946 | 91.9 | 94.6 | 1 | 90.0-110 | | | 2.90 | 20 |

L1536827-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1536827-02 09/23/22 00:47 • (MS) R3840481-7 09/23/22 00:48 • (MSD) R3840481-8 09/23/22 00:51

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | 0.00799 | 0.107 | 0.110 | 99.0 | 102 | 1 | 90.0-110 | | | 2.76 | 20 |



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |
| Qualifier | Description |
| E | The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). |
| V | The sample concentration is too high to evaluate accurate spike recoveries. |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

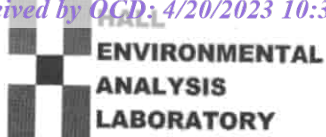
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 3524 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

L153 6827

| | | | | | | | |
|--|--|------------------|--|-----------------------|--|---------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|------------------------------|
| 1 | 2209730-001F | EB-09-14-22 | 500AMBHDP | Groundw | 9/14/2022 8:30:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2209730-002F | MKTF-27 | 500AMBHDP | Groundw | 9/14/2022 9:00:00 AM | 1 | Total Cyanide J and MDL - 02 |
| 3 | 2209730-003F | MKTF-28 | 500AMBHDP | Groundw | 9/14/2022 9:45:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2209730-004F | MKTF-29 | 500AMBHDP | Groundw | 9/14/2022 10:10:00 AM | 1 | Total Cyanide J and MDL - 04 |
| 5 | 2209730-005F | MKTF-30 | 500AMBHDP | Groundw | 9/14/2022 10:30:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2209730-006F | OPIS-1 | 500AMBHDP | Groundw | 9/14/2022 10:50:00 AM | 1 | Total Cyanide J and MDL - 06 |
| 7 | 2209730-007F | NAPI-2 | 500AMBHDP | Groundw | 9/14/2022 11:20:00 AM | 1 | Total Cyanide J and MDL - 07 |
| 8 | 2209730-008F | NAPI-3 | 500AMBHDP | Groundw | 9/14/2022 11:45:00 AM | 1 | Total Cyanide J and MDL - 08 |
| 9 | 2209730-009F | KA-3 | 500AMBHDP | Groundw | 9/14/2022 12:10:00 PM | 1 | Total Cyanide J and MDL - 09 |
| 10 | 2209730-010F | DUP 9-14-22 | 500AMBHDP | Groundw | 9/14/2022 | 1 | Total Cyanide J and MDL - 10 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

5755 8089 3595 1.8+U=1.8

| | | | | | |
|----------------------------|-----------------|---------------|---------------------------------|---------------|------------|
| Relinquished By: <u>su</u> | Date: 9/15/2022 | Time: 8:16 AM | Received By: <u>[Signature]</u> | Date: 9/14/22 | Time: 9:00 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

| | | |
|--|--|---|
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE |
| | | FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____ |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-70240 | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: 70240 | | | RunNo: 91129 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260099 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-70240 | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | Batch ID: 70240 | | | RunNo: 91129 | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/19/2022 | | | SeqNo: 3260100 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0030 | 0.002000 | 0 | 124 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.1 | 50 | 150 | | | J |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 83.1 | 50 | 150 | | | J |
| Chromium | 0.0046 | 0.0060 | 0.006000 | 0 | 76.8 | 50 | 150 | | | J |
| Cobalt | 0.0070 | 0.0060 | 0.006000 | 0 | 117 | 50 | 150 | | | |
| Nickel | 0.0048 | 0.010 | 0.005000 | 0 | 96.1 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.1 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 101 | 50 | 150 | | | J |
| Zinc | 0.0095 | 0.010 | 0.01000 | 0 | 95.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-70240 | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: 70240 | | | RunNo: 91129 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260101 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.54 | 0.0020 | 0.5000 | 0 | 109 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 85 | 115 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Zinc | 0.56 | 0.010 | 0.5000 | 0 | 113 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|--------|---------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: MB-B | | SampType: MBLK | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: PBW | | Batch ID: B91347 | | | RunNo: 91347 | | | | | |
| Prep Date: | | Analysis Date: 9/27/2022 | | | SeqNo: 3270225 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------------|-----------|---|------|----------|--------------------|------|----------|------|
| Sample ID: LLCS-B | | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: B91347 | | RunNo: 91347 | | | | | | |
| Prep Date: | | Analysis Date: 9/27/2022 | | SeqNo: 3270226 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0030 | 0.002000 | 0 | 68.2 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 88.8 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 95.9 | 50 | 150 | | | J |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 96.3 | 50 | 150 | | | J |
| Nickel | 0.0067 | 0.010 | 0.005000 | 0 | 133 | 50 | 150 | | | J |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 96.8 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------|---------------------------------|-----------|-------------|---|----------|--------------------|------|----------|------|
| Sample ID: LCS-B | | SampType: LCS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: LCSW | | Batch ID: B91347 | | | RunNo: 91347 | | | | | |
| Prep Date: | | Analysis Date: 9/27/2022 | | | SeqNo: 3270227 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: B91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269822 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: B91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269823 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0020 | 0.002000 | 0 | 68.2 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 88.8 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 110 | 50 | 150 | | | |
| Chromium | 0.0058 | 0.0060 | 0.006000 | 0 | 95.9 | 50 | 150 | | | J |
| Cobalt | 0.0058 | 0.0060 | 0.006000 | 0 | 96.3 | 50 | 150 | | | J |
| Nickel | 0.0067 | 0.010 | 0.005000 | 0 | 133 | 50 | 150 | | | J |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 96.8 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: B91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269824 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0020 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269825 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269826 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0020 | 0.002000 | 0 | 70.7 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.4 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 124 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 100 | 50 | 150 | | | |
| Cobalt | 0.0053 | 0.0060 | 0.006000 | 0 | 88.2 | 50 | 150 | | | J |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 114 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269827 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271799 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271800 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271801 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209730-010EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: DUP 9-14-22 | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271824 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.11 | 0.0050 | 0.1000 | 0.004047 | 110 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209730-010EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: DUP 9-14-22 | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271825 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0.004047 | 97.4 | 70 | 130 | 11.7 | 20 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|----------------------|--------|--------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-70240 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 70240 | | RunNo: 91144 | | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | SeqNo: 3260907 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-70240 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 70240 | | | RunNo: 91144 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260908 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 111 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 107 | 50 | 150 | | | |
| Lead | 0.00054 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-70240 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70240 | | | RunNo: 91144 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260909 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.2 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 95.7 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.2 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.5 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209730-009DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: KA-3 | | Batch ID: 70240 | | | RunNo: 91144 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260930 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0007115 | 102 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0006673 | 91.7 | 70 | 130 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0.0008011 | 99.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209730-009DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: KA-3 | | Batch ID: 70240 | | | RunNo: 91144 | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | | SeqNo: 3260931 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

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WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|--------|----------|------|
| Sample ID: 2209730-009DMSDL | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: KA-3 | | Batch ID: 70240 | | RunNo: 91144 | | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | SeqNo: 3260931 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | 4.02 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0007115 | 102 | 70 | 130 | 0.0267 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0.0006673 | 90.6 | 70 | 130 | 1.12 | 20 | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0.0008011 | 89.4 | 70 | 130 | 9.87 | 20 | |

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209730-010DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: DUP 9-14-22 | | Batch ID: 70240 | | RunNo: 91144 | | | | | | |
| Prep Date: 9/16/2022 | | Analysis Date: 9/19/2022 | | SeqNo: 3260935 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.022 | 0.0010 | 0.02500 | 0 | 88.8 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.001286 | 97.3 | 70 | 130 | | | |
| Lead | 0.014 | 0.00050 | 0.01250 | 0.002911 | 86.7 | 70 | 130 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0.001432 | 85.2 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

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| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257887 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257889 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00083 | 0.0010 | 0.001000 | 0 | 83.2 | 50 | 150 | | | J |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 95.5 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 97.0 | 50 | 150 | | | J |
| Selenium | 0.00062 | 0.0010 | 0.001000 | 0 | 62.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257891 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.2 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.7 | 85 | 115 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209730-009EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: KA-3 | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257922 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0006708 | 99.6 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.0002101 | 86.7 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0.001416 | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209730-009EMSDL | SampType: MSD | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: KA-3 | Batch ID: C91078 | RunNo: 91078 | | | | | | | | |
| Prep Date: | Analysis Date: 9/15/2022 | SeqNo: 3257923 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|-------|----------|------|
| Sample ID: 2209730-009EMSDL | | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: KA-3 | | Batch ID: C91078 | | RunNo: 91078 | | | | | | |
| Prep Date: | | Analysis Date: 9/15/2022 | | SeqNo: 3257923 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 70 | 130 | 0.727 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0006708 | 100 | 70 | 130 | 0.855 | 20 | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.0002101 | 85.1 | 70 | 130 | 1.82 | 20 | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0.001416 | 97.8 | 70 | 130 | 4.67 | 20 | |

| | | | | | | | | | | |
|-----------------------------------|--------|---------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2209730-010EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: DUP 9-14-22 | | Batch ID: C91078 | | RunNo: 91078 | | | | | | |
| Prep Date: | | Analysis Date: 9/15/2022 | | SeqNo: 3257925 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0.0004917 | 103 | 70 | 130 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0.00007954 | 88.2 | 70 | 130 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0.0009367 | 98.0 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70279 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 70279 | RunNo: 91165 |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | SeqNo: 3261772 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-70279 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 70279 | RunNo: 91165 |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | SeqNo: 3261773 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00017 0.00020 0.0001500 | 0 111 50 150 J |

| | | |
|----------------------|--------------------------|--|
| Sample ID: LCS-70279 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 70279 | RunNo: 91165 |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | SeqNo: 3261774 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 | 0 102 85 115 |

| | | |
|---------------------------|--------------------------|--|
| Sample ID: 2209730-001DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-09-14-22 | Batch ID: 70279 | RunNo: 91165 |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | SeqNo: 3261802 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0050 0.00020 0.005000 | 0 101 75 125 |

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2209730-001DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: EB-09-14-22 | Batch ID: 70279 | RunNo: 91165 |
| Prep Date: 9/20/2022 | Analysis Date: 9/20/2022 | SeqNo: 3261805 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0050 0.00020 0.005000 | 0 100 75 125 0.496 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70247 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70247 | | RunNo: 91159 | | | | | | | |
| Prep Date: 9/19/2022 | Analysis Date: 9/19/2022 | | SeqNo: 3261596 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70247 | SampType: LCS | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSW | Batch ID: 70247 | | RunNo: 91159 | | | | | | | |
| Prep Date: 9/19/2022 | Analysis Date: 9/19/2022 | | SeqNo: 3261598 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: LCSD-70247 | SampType: LCSD | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70247 | | RunNo: 91159 | | | | | | | |
| Prep Date: 9/19/2022 | Analysis Date: 9/19/2022 | | SeqNo: 3261599 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 | 0.1000 | 0 | 101 | 70 | 130 | 0.626 | 20 | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70247 | SampType: MBLK | | TestCode: EPA Method 8011/504.1: EDB | | | | | | | |
| Client ID: PBW | Batch ID: 70247 | | RunNo: 91159 | | | | | | | |
| Prep Date: 9/19/2022 | Analysis Date: 9/19/2022 | | SeqNo: 3261678 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70201 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 70201 | RunNo: 91269 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266117 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.025 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.035 | | 0.03750 | | 93.7 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70201 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 70201 | RunNo: 91269 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266118 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.14 | 0.064 | 0.1875 | 0 | 75.5 | 31.7 | 75.4 | | | S |
| Surr: DNOP | 0.019 | | 0.01875 | | 101 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70201 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70201 | RunNo: 91269 | | | | | | | | |
| Prep Date: 9/15/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266119 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 66.6 | 31.7 | 75.4 | 12.5 | 20 | |
| Surr: DNOP | 0.017 | | 0.01875 | | 90.0 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259450 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.3 | 80 | 120 | | | |
| Surr: BFB | 42 | | 20.00 | | 210 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259451 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 97.0 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R91115 | | RunNo: 91115 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259547 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 19 | 1.0 | 20.00 | 0 | 96.8 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 91.7 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 85.6 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 89.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.4 | | 10.00 | | 94.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 119 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R91115 | | RunNo: 91115 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259578 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R91115 | | | RunNo: 91115 | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | | SeqNo: 3259578 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 119 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70216 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70216 | RunNo: 91245 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265611 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 51.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.6 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 59.3 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.2 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.0 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 79 | | 100.0 | | 79.3 | 34.4 | 134 | | | |

| Sample ID: LCS-70216 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70216 | RunNo: 91245 | | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265612 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70216 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70216 | | RunNo: 91245 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265612 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 66 | 10 | 100.0 | 0 | 65.8 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 59 | 5.0 | 100.0 | 0 | 58.5 | 15 | 89.8 | | | |
| Phenol | 82 | 20 | 200.0 | 0 | 41.1 | 17 | 61.1 | | | |
| Pyrene | 80 | 10 | 100.0 | 0 | 80.0 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 50.1 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 38.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 62.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 72 | | 100.0 | | 72.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 65.8 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 83 | | 100.0 | | 82.8 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70216 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70216 | | RunNo: 91245 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/22/2022 | | SeqNo: 3265613 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 69 | 10 | 100.0 | 0 | 68.7 | 21.3 | 104 | 4.23 | 45.3 | |
| 1,4-Dichlorobenzene | 60 | 5.0 | 100.0 | 0 | 60.3 | 15 | 89.8 | 3.06 | 39.6 | |
| Phenol | 85 | 20 | 200.0 | 0 | 42.7 | 17 | 61.1 | 3.65 | 42.5 | |
| Pyrene | 78 | 10 | 100.0 | 0 | 77.9 | 61 | 123 | 2.65 | 11.8 | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 50.4 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.3 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 66.9 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.8 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 66 | | 100.0 | | 65.8 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 79 | | 100.0 | | 79.2 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-70216 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 70216 | | RunNo: 91209 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263103 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 58.4 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 74 | | 200.0 | | 37.2 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 67 | | 100.0 | | 67.0 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70216-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70216 | | RunNo: 91209 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263104 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.60 | 0.10 | 2.000 | 0 | 30.0 | 15 | 60.5 | | | |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 15 | 92 | | | |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 96 | | | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 21 | 103 | | | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 32.8 | 119 | | | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 64.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 32 | 132 | | | |
| Chrysene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 56 | | 100.0 | | 56.3 | 31.6 | 100 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209730

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-70216-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 70216 | | RunNo: 91209 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263104 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 72 | | 200.0 | | 36.1 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 100.0 | | 53.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 59 | | 100.0 | | 59.0 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70216-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70216 | | RunNo: 91209 | | | | | | | |
| Prep Date: 9/16/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263105 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.10 | 2.000 | 0 | 31.0 | 15 | 60.5 | 3.28 | 29.7 | |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.3 | 3.92 | 31.7 | |
| 1-Methylnaphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 79.6 | 4.00 | 31.4 | |
| 2-Methylnaphthalene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 15 | 78.6 | 4.08 | 30.5 | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 15 | 92 | 0 | 30.5 | |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 96 | 3.57 | 25.1 | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 21 | 103 | 3.39 | 26.4 | |
| Anthracene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21.1 | 106 | 6.45 | 14.4 | |
| Fluoranthene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 32.8 | 119 | 5.80 | 14.8 | |
| Pyrene | 1.3 | 1.0 | 2.000 | 0 | 67.0 | 34.1 | 110 | 4.58 | 19.2 | |
| Benz(a)anthracene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 32 | 132 | 5.63 | 29.3 | |
| Chrysene | 1.4 | 0.30 | 2.000 | 0 | 68.0 | 31.3 | 112 | 4.51 | 19 | |
| Benzo(b)fluoranthene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 34.1 | 119 | 4.38 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 24.7 | 152 | 4.03 | 21.3 | |
| Surr: Nitrobenzene-d5 | 61 | | 100.0 | | 60.9 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.4 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.8 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 66 | | 100.0 | | 65.6 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209730

RcptNo: 1

Received By: Juan Rojas

9/15/2022 7:35:00 AM

Completed By: Sean Livingston

9/15/2022 8:10:15 AM

Reviewed By:

[Signature] 9-15-22

[Signature]

[Signature]

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 20/10
(<2 or >12 unless noted)

Adjusted? yesChecked by: jn 9/15/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

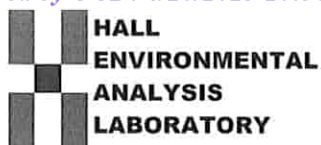
Client Instructions: _____

16. Additional remarks:

0.5 ml of H₂O₃ was added to sample 006D, 008D
for pH 2. jn 9/15/22

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.4 | Good | | | | |
| 2 | 1.6 | Good | | | | |
| 3 | 2.3 | Good | | | | |
| 4 | 0.4 | Good | | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209730

RcptNo: 1

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 5 | 0.9 | Good | | | | |

Chain-of-Custody Record

Marathon Gallup Refinery

Address: 92 Giant Crossing Road

Jamestown, NM, 87347

808-640-1823

Fax#:

Package:

Condition: ☐ Az Compliance ☐ Level 4 (Full Validation)

Label:

Other:

Type:

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

019

020

021

022

023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including oil): 2209 730

Container Type and #

Preservative Type

HEAL No.

2209 730

001

002

003

004

005

006

007

008

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012

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021

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023

024

025

026

Turn-Around Time:

X Standard Rush

Project Name:

3-4

2022 GW Sampling at Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: ☒ Yes ☐ No

of



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2022

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 3rd Quarter

OrderNo.: 2209816

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 9/16/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2209816
Date: 10/4/2022

CLIENT: Marathon
Project: 2022 GW Sampling 3rd Quarter

Analytical Notes Regarding this Workorder are listed below:

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

Naphthalene, 1-Methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample OW-57

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 6:49:00 PM | B91113 |
| Surr: BFB | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:49:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Acetone | 4.3 | 2.5 | 10 | J | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:27:10 PM | A91114 |
| Surr: Toluene-d8 | 99.3 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 3:27:10 PM | A91114 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 3:30:20 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.021 | 0.016 | 0.064 | J | mg/L | 1 | 9/26/2022 4:06:24 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/26/2022 4:06:24 PM | 70323 |
| Surr: DNOP | 87.0 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 4:06:24 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: 2-Fluorophenol | 55.3 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: Phenol-d5 | 41.8 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 65.5 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: Nitrobenzene-d5 | 67.0 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 66.1 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 82.1 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 7:06:21 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 11:03:00 PM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 63.7 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 60.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 11:03:00 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 70.0 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 11:03:00 PM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/21/2022 3:20:35 PM | 70299 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/21/2022 11:52:09 AM | 70299 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/21/2022 11:13:56 AM | 70299 |
| Arsenic | ND | 0.00013 | 0.0010 | | mg/L | 1 | 9/21/2022 11:13:56 AM | 70299 |
| Lead | ND | 0.000061 | 0.00050 | | mg/L | 1 | 9/21/2022 11:13:56 AM | 70299 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/21/2022 11:13:56 AM | 70299 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 2:48:47 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
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| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-09-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:15:00 AM

Lab ID: 2209816-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:46:23 PM | A91392 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| Zinc | 0.0066 | 0.0032 | 0.010 | J | mg/L | 1 | 9/27/2022 4:28:39 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 11:58:51 AM | A91132 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 11:58:51 AM | A91132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/19/2022 11:58:51 AM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 11:58:51 AM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 2:50:54 PM | 70307 |

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| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:45:00 AM

Lab ID: 2209816-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.93 | 0.045 | 0.25 | | mg/L | 5 | 9/19/2022 11:51:00 AM | C91131 |
| Surr: BFB | 110 | 0 | 70-130 | | %Rec | 5 | 9/19/2022 11:51:00 AM | C91131 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 400 | 1.1 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Toluene | 1.4 | 1.0 | 5.0 | J | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Ethylbenzene | 9.1 | 1.1 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Methyl tert-butyl ether (MTBE) | 6.6 | 2.0 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,2,4-Trimethylbenzene | 12 | 0.61 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,1-Dichloroethane | 17 | 1.4 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Isopropylbenzene | 1.7 | 0.91 | 5.0 | J | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| n-Propylbenzene | 1.4 | 0.91 | 5.0 | J | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Vinyl chloride | 2.0 | 1.6 | 5.0 | J | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Xylenes, Total | 5.6 | 1.9 | 7.5 | J | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| tert-Butyl alcohol | ND | 78 | 120 | | µg/L | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Surr: 4-Bromofluorobenzene | 96.6 | 0 | 70-130 | | %Rec | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Surr: Dibromofluoromethane | 110 | 0 | 70-130 | | %Rec | 5 | 9/19/2022 3:45:57 PM | R91137 |
| Surr: Toluene-d8 | 96.6 | 0 | 70-130 | | %Rec | 5 | 9/19/2022 3:45:57 PM | R91137 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209816-002B

Client Sample ID: MKTF-16

Collection Date: 9/15/2022 8:45:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 9/22/2022 3:45:24 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:45:00 AM

Lab ID: 2209816-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|-------|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: 2-Fluorophenol | 45.9 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: Phenol-d5 | 34.9 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 58.4 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: Nitrobenzene-d5 | 62.8 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 63.3 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 71.9 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 7:48:40 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 1.4 | 0.11 | 1.0 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Naphthalene | 1.3 | 0.20 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| 1-Methylnaphthalene | 0.86 | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| 2-Methylnaphthalene | 0.16 | 0.14 | 0.30 | J | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Surr: Nitrobenzene-d5 | 57.1 | 0 | 31.6-100 | | %Rec | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 53.7 | 0 | 26.7-90.1 | | %Rec | 1 | 9/26/2022 11:52:00 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 53.5 | 0 | 72.3-147 | S | %Rec | 1 | 9/26/2022 11:52:00 PM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:45:00 AM

Lab ID: 2209816-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|-----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 6.3 | 0.016 | 0.030 | * | mg/L | 10 | 9/23/2022 11:08:58 AM | 70299 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Chromium | 0.062 | 0.0020 | 0.0060 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Iron | 49 | 1.9 | 5.0 | * | mg/L | 100 | 9/27/2022 12:05:16 PM | 70299 |
| Manganese | 1.7 | 0.0029 | 0.010 | * | mg/L | 5 | 9/21/2022 12:01:34 PM | 70299 |
| Nickel | 0.039 | 0.0053 | 0.010 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/21/2022 3:22:15 PM | 70299 |
| Vanadium | 0.10 | 0.0035 | 0.050 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| Zinc | 0.33 | 0.0039 | 0.010 | | mg/L | 1 | 9/21/2022 12:00:19 PM | 70299 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00049 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/21/2022 11:16:23 AM | 70299 |
| Arsenic | 0.0093 | 0.00013 | 0.0010 | | mg/L | 1 | 9/21/2022 11:16:23 AM | 70299 |
| Lead | 0.052 | 0.00031 | 0.0025 | * | mg/L | 5 | 9/21/2022 12:30:14 PM | 70299 |
| Selenium | 0.0092 | 0.00037 | 0.0010 | | mg/L | 1 | 9/21/2022 11:16:23 AM | 70299 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00092 | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 2:53:00 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:45:00 AM

Lab ID: 2209816-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.28 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Iron | 0.33 | 0.010 | 0.020 | * | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Nickel | 0.0075 | 0.0033 | 0.010 | J | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:52:49 PM | A91392 |
| Vanadium | 0.0042 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| Zinc | 0.017 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 4:33:03 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00060 | 0.00044 | 0.0010 | J | mg/L | 1 | 9/19/2022 12:01:32 PM | A91132 |
| Arsenic | 0.0011 | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 12:01:32 PM | A91132 |
| Lead | 0.00068 | 0.000057 | 0.00050 | | mg/L | 1 | 9/19/2022 12:01:32 PM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 12:01:32 PM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 2:55:05 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 8:45:00 AM

Lab ID: 2209816-002G

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------|--------|-------|------|------|-------|----|----------------------|----------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: JTT | |
| Chloride | 80 | 1.2 | 2.5 | | mg/L | 5 | 9/16/2022 3:36:15 PM | R91119 |
| Nitrogen, Nitrite (As N) | ND | 0.057 | 0.50 | | mg/L | 5 | 9/16/2022 3:36:15 PM | R91119 |
| Nitrogen, Nitrate (As N) | 0.59 | 0.10 | 0.50 | | mg/L | 5 | 9/16/2022 3:36:15 PM | R91119 |
| Sulfate | 28 | 1.2 | 2.5 | | mg/L | 5 | 9/16/2022 3:36:15 PM | R91119 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:30:00 AM

Lab ID: 2209816-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 3.6 | 0.045 | 0.25 | | mg/L | 5 | 9/16/2022 7:28:00 PM | B91113 |
| Surr: BFB | 158 | 0 | 70-130 | S | %Rec | 5 | 9/16/2022 7:28:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 1100 | 11 | 50 | | µg/L | 50 | 9/19/2022 4:13:02 PM | R91137 |
| Toluene | 2.6 | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Ethylbenzene | 99 | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,2,4-Trimethylbenzene | 26 | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,3,5-Trimethylbenzene | 0.44 | 0.18 | 1.0 | J | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,1-Dichloroethene | 0.34 | 0.20 | 1.0 | J | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Isopropylbenzene | 20 | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 4-Isopropyltoluene | 2.8 | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| n-Butylbenzene | 0.89 | 0.25 | 3.0 | J | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| n-Propylbenzene | 7.9 | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| sec-Butylbenzene | 1.8 | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Xylenes, Total | 110 | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 4:21:18 PM | A91114 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 4:21:18 PM | A91114 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209816-003B

Client Sample ID: OW-12A

Collection Date: 9/15/2022 9:30:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/22/2022 4:00:32 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:30:00 AM

Lab ID: 2209816-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 1.9 | 0.016 | 0.064 | | mg/L | 1 | 9/26/2022 4:30:07 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/26/2022 4:30:07 PM | 70323 |
| Surr: DNOP | 82.4 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 4:30:07 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: 2-Fluorophenol | 47.9 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: Phenol-d5 | 35.0 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 67.5 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: Nitrobenzene-d5 | 65.3 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 65.7 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 72.4 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 8:31:01 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 11 | 0.11 | 1.0 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Naphthalene | 3.4 | 0.20 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| 1-Methylnaphthalene | 0.78 | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| 2-Methylnaphthalene | 0.16 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/27/2022 12:41:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:30:00 AM

Lab ID: 2209816-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 57.4 | 0 | 31.6-100 | | %Rec | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Surr: 2-Fluorobiphenyl | 49.4 | 0 | 26.7-90.1 | | %Rec | 1 | 9/27/2022 12:41:00 AM | 70290 |
| Surr: 4-Terphenyl-d14 | 53.9 | 0 | 72.3-147 | S | %Rec | 1 | 9/27/2022 12:41:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:30:00 AM

Lab ID: 2209816-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 1.3 | 0.0079 | 0.015 | | mg/L | 5 | 9/21/2022 12:04:15 PM | 70299 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Chromium | 0.010 | 0.0020 | 0.0060 | | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Cobalt | 0.011 | 0.0035 | 0.0060 | | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Nickel | 0.012 | 0.0053 | 0.010 | | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/21/2022 3:23:35 PM | 70299 |
| Vanadium | 0.027 | 0.0035 | 0.050 | J | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| Zinc | 0.0083 | 0.0039 | 0.010 | J | mg/L | 1 | 9/21/2022 12:02:50 PM | 70299 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/21/2022 11:23:43 AM | 70299 |
| Arsenic | 0.0097 | 0.00013 | 0.0010 | | mg/L | 1 | 9/21/2022 11:23:43 AM | 70299 |
| Lead | 0.012 | 0.000061 | 0.00050 | | mg/L | 1 | 9/21/2022 11:23:43 AM | 70299 |
| Selenium | 0.0018 | 0.00037 | 0.0010 | | mg/L | 1 | 9/21/2022 11:23:43 AM | 70299 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:01:26 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:30:00 AM

Lab ID: 2209816-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.13 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Nickel | 0.0076 | 0.0033 | 0.010 | J | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:54:59 PM | A91392 |
| Vanadium | 0.0044 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 4:45:40 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 12:04:13 PM | A91132 |
| Arsenic | 0.0064 | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 12:04:13 PM | A91132 |
| Lead | 0.0010 | 0.000057 | 0.00050 | | mg/L | 1 | 9/19/2022 12:04:13 PM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 12:04:13 PM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:03:33 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:55:00 AM

Lab ID: 2209816-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.39 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 7:48:00 PM | B91113 |
| Surr: BFB | 517 | 0 | 70-130 | S | %Rec | 1 | 9/16/2022 7:48:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 1.0 | 0.23 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Methyl tert-butyl ether (MTBE) | 60 | 0.39 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,2,4-Trimethylbenzene | 0.13 | 0.12 | 1.0 | J | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,2-Dichloroethane (EDC) | 6.8 | 0.25 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,1-Dichloroethane | 0.49 | 0.27 | 1.0 | J | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Isopropylbenzene | 30 | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| n-Butylbenzene | 1.5 | 0.25 | 3.0 | J | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| n-Propylbenzene | 1.1 | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| sec-Butylbenzene | 6.5 | 0.14 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Surr: 4-Bromofluorobenzene | 95.7 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Surr: Dibromofluoromethane | 121 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 3:18:51 PM | R91137 |
| Surr: Toluene-d8 | 99.9 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 3:18:51 PM | R91137 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 3rd Quarter

Lab ID: 2209816-004B

Client Sample ID: OW-70

Collection Date: 9/15/2022 9:55:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 9/22/2022 4:15:38 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:55:00 AM

Lab ID: 2209816-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.94 | 0.016 | 0.064 | | mg/L | 1 | 9/26/2022 4:53:51 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/26/2022 4:53:51 PM | 70323 |
| Surr: DNOP | 94.2 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 4:53:51 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Phenol | 29 | 18 | 20 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: 2-Fluorophenol | 56.0 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: Phenol-d5 | 42.6 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 69.1 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: Nitrobenzene-d5 | 67.1 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 67.0 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 83.5 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 9:13:15 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.70 | 0.11 | 1.0 | J | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Naphthalene | 1.3 | 0.20 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| 1-Methylnaphthalene | 1.0 | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| 2-Methylnaphthalene | 0.74 | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Acenaphthene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Phenanthrene | 0.40 | 0.16 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Anthracene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/27/2022 1:29:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:55:00 AM

Lab ID: 2209816-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 63.3 | 0 | 31.6-100 | | %Rec | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Surr: 2-Fluorobiphenyl | 53.5 | 0 | 26.7-90.1 | | %Rec | 1 | 9/27/2022 1:29:00 AM | 70290 |
| Surr: 4-Terphenyl-d14 | 54.7 | 0 | 72.3-147 | S | %Rec | 1 | 9/27/2022 1:29:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:55:00 AM

Lab ID: 2209816-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.79 | 0.0016 | 0.0030 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Chromium | 0.0070 | 0.0020 | 0.0060 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Cobalt | 0.0094 | 0.0035 | 0.0060 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Nickel | 0.046 | 0.0053 | 0.010 | | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/21/2022 3:25:00 PM | 70299 |
| Vanadium | 0.014 | 0.0035 | 0.050 | J | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| Zinc | 0.0047 | 0.0039 | 0.010 | J | mg/L | 1 | 9/21/2022 12:05:44 PM | 70299 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/21/2022 11:28:36 AM | 70299 |
| Arsenic | 0.0028 | 0.00013 | 0.0010 | | mg/L | 1 | 9/21/2022 11:28:36 AM | 70299 |
| Lead | 0.0023 | 0.000061 | 0.00050 | | mg/L | 1 | 9/21/2022 11:28:36 AM | 70299 |
| Selenium | 0.00069 | 0.00037 | 0.0010 | J | mg/L | 1 | 9/21/2022 11:28:36 AM | 70299 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:05:40 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 9:55:00 AM

Lab ID: 2209816-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.53 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Cadmium | 0.0010 | 0.00098 | 0.0020 | J | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Cobalt | 0.0042 | 0.0024 | 0.0060 | J | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Nickel | 0.044 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 1:57:00 PM | A91392 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 4:49:47 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 12:12:19 PM | A91132 |
| Arsenic | 0.0012 | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 12:12:19 PM | A91132 |
| Lead | 0.00012 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/19/2022 12:12:19 PM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 12:12:19 PM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:07:48 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 30 | 0.45 | 2.5 | | mg/L | 50 | 9/16/2022 8:07:00 PM | B91113 |
| Surr: BFB | 109 | 0 | 70-130 | | %Rec | 50 | 9/16/2022 8:07:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 14000 | 110 | 500 | | µg/L | 500 | 9/19/2022 4:40:05 PM | R91137 |
| Toluene | 27 | 10 | 50 | J | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Ethylbenzene | 580 | 11 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Methyl tert-butyl ether (MTBE) | 41 | 20 | 50 | J | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Isopropylbenzene | 16 | 9.1 | 50 | J | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| n-Propylbenzene | 42 | 9.1 | 50 | J | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Xylenes, Total | 100 | 19 | 75 | | µg/L | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Surr: 4-Bromofluorobenzene | 97.2 | 0 | 70-130 | | %Rec | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Surr: Dibromofluoromethane | 111 | 0 | 70-130 | | %Rec | 50 | 9/16/2022 5:15:28 PM | A91114 |
| Surr: Toluene-d8 | 98.0 | 0 | 70-130 | | %Rec | 50 | 9/16/2022 5:15:28 PM | A91114 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 9/22/2022 4:30:42 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 6.2 | 0.032 | 0.13 | | mg/L | 2 | 9/27/2022 11:35:48 AM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.10 | 0.16 | D | mg/L | 2 | 9/27/2022 11:35:48 AM | 70323 |
| Surr: DNOP | 100 | 0 | 42.2-138 | | %Rec | 2 | 9/27/2022 11:35:48 AM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 1-Methylnaphthalene | 77 | 4.3 | 5.0 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 2-Methylnaphthalene | 55 | 4.2 | 5.0 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Naphthalene | 100 | 3.2 | 5.0 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Phenol | 70 | 18 | 20 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: 2-Fluorophenol | 46.9 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: Phenol-d5 | 37.1 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 64.8 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: Nitrobenzene-d5 | 63.7 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 58.4 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 73.7 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 9:55:38 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.80 | 0.11 | 1.0 | J | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Acenaphthene | 2.4 | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Fluorene | 3.9 | 0.095 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Phenanthrene | 5.1 | 0.16 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/27/2022 2:18:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-57**Project:** 2022 GW Sampling 3rd Quarter**Collection Date:** 9/15/2022 10:25:00 AM**Lab ID:** 2209816-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 59.4 | 0 | 31.6-100 | | %Rec | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Surr: 2-Fluorobiphenyl | 43.1 | 0 | 26.7-90.1 | | %Rec | 1 | 9/27/2022 2:18:00 AM | 70290 |
| Surr: 4-Terphenyl-d14 | 51.1 | 0 | 72.3-147 | S | %Rec | 1 | 9/27/2022 2:18:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 24 | 0.079 | 0.15 | * | mg/L | 50 | 9/27/2022 12:06:54 PM | 70359 |
| Beryllium | 0.027 | 0.0044 | 0.010 | * | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Chromium | 0.21 | 0.0098 | 0.030 | * | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Cobalt | 0.12 | 0.018 | 0.030 | | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Nickel | 0.26 | 0.027 | 0.050 | * | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Vanadium | 0.42 | 0.018 | 0.25 | | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| Zinc | 0.33 | 0.019 | 0.050 | | mg/L | 5 | 9/23/2022 12:55:14 PM | 70359 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/26/2022 11:47:28 AM | 70359 |
| Arsenic | 0.036 | 0.00013 | 0.0010 | * | mg/L | 1 | 9/26/2022 11:47:28 AM | 70359 |
| Lead | 0.28 | 0.0012 | 0.010 | * | mg/L | 20 | 9/26/2022 12:51:01 PM | 70359 |
| Selenium | 0.062 | 0.0074 | 0.020 | * | mg/L | 20 | 9/26/2022 12:51:01 PM | 70359 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00029 | 0.000091 | 0.00020 | | mg/L | 1 | 9/26/2022 1:46:23 PM | 70391 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 3.1 | 0.0056 | 0.010 | * | mg/L | 5 | 9/27/2022 4:56:05 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Nickel | 0.056 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 9/28/2022 1:59:06 PM | A91392 |
| Vanadium | 0.0039 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| Zinc | 0.0098 | 0.0032 | 0.010 | J | mg/L | 1 | 9/27/2022 4:54:06 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 12:15:00 PM | A91132 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 12:15:00 PM | A91132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 9/19/2022 12:15:00 PM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 12:15:00 PM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:09:57 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022 10:25:00 AM

Lab ID: 2209816-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Acetone | 11 | 2.5 | 10 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 2-Butanone | 17 | 2.0 | 10 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| tert-Butyl alcohol | ND | 16 | 25 | | µg/L | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Surr: 1,2-Dichloroethane-d4 | 118 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 2:51:45 PM | R91137 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 9/19/2022 2:51:45 PM | R91137 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022

Lab ID: 2209816-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: BRM | |
| Gasoline Range Organics (GRO) | 0.35 | 0.0090 | 0.050 | | mg/L | 1 | 9/16/2022 8:27:00 PM | B91113 |
| Surr: BFB | 493 | 0 | 70-130 | S | %Rec | 1 | 9/16/2022 8:27:00 PM | B91113 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | 0.99 | 0.23 | 1.0 | J | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Methyl tert-butyl ether (MTBE) | 55 | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,2,4-Trimethylbenzene | 0.15 | 0.12 | 1.0 | J | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,2-Dichloroethane (EDC) | 5.9 | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,1-Dichloroethane | 0.47 | 0.27 | 1.0 | J | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Isopropylbenzene | 28 | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| n-Butylbenzene | 1.4 | 0.25 | 3.0 | J | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| n-Propylbenzene | 1.0 | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| sec-Butylbenzene | 6.4 | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Surr: 4-Bromofluorobenzene | 94.1 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Surr: Dibromofluoromethane | 112 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:09:36 PM | A91114 |
| Surr: Toluene-d8 | 97.9 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:09:36 PM | A91114 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | DUP 9-15-22 |
| Project: | 2022 GW Sampling 3rd Quarter | Collection Date: | 9/15/2022 |
| Lab ID: | 2209816-007B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 4:45:43 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022

Lab ID: 2209816-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.96 | 0.016 | 0.064 | | mg/L | 1 | 9/26/2022 6:05:04 PM | 70323 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 9/26/2022 6:05:04 PM | 70323 |
| Surr: DNOP | 92.2 | 0 | 42.2-138 | | %Rec | 1 | 9/26/2022 6:05:04 PM | 70323 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: JME | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Di-n-butyl phthalate | 20 | 7.7 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: 2-Fluorophenol | 50.2 | 0 | 15-84.5 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: Phenol-d5 | 38.8 | 0 | 15-67 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: 2,4,6-Tribromophenol | 63.8 | 0 | 15-108 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: Nitrobenzene-d5 | 64.5 | 0 | 16.8-112 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: 2-Fluorobiphenyl | 64.1 | 0 | 15-101 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| Surr: 4-Terphenyl-d14 | 68.9 | 0 | 34.4-134 | | %Rec | 1 | 9/28/2022 10:37:55 PM | 70290 |
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| 1,4-Dioxane | 0.66 | 0.11 | 1.0 | J | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Acenaphthene | 0.14 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Phenanthrene | 0.34 | 0.16 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Fluoranthene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Pyrene | 0.44 | 0.32 | 1.0 | J | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 9/27/2022 3:06:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022

Lab ID: 2209816-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|-----------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: TOM | |
| Surr: Nitrobenzene-d5 | 60.7 | 0 | 31.6-100 | | %Rec | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Surr: 2-Fluorobiphenyl | 53.2 | 0 | 26.7-90.1 | | %Rec | 1 | 9/27/2022 3:06:00 AM | 70290 |
| Surr: 4-Terphenyl-d14 | 48.5 | 0 | 72.3-147 | S | %Rec | 1 | 9/27/2022 3:06:00 AM | 70290 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022

Lab ID: 2209816-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.70 | 0.0016 | 0.0030 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Chromium | 0.0031 | 0.0020 | 0.0060 | J | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Cobalt | 0.012 | 0.0035 | 0.0060 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Nickel | 0.044 | 0.0053 | 0.010 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 9/21/2022 3:33:53 PM | 70299 |
| Vanadium | 0.0083 | 0.0035 | 0.050 | J | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 9/21/2022 12:08:54 PM | 70299 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/21/2022 11:35:57 AM | 70299 |
| Arsenic | 0.0025 | 0.00013 | 0.0010 | | mg/L | 1 | 9/21/2022 11:35:57 AM | 70299 |
| Lead | 0.0016 | 0.000061 | 0.00050 | | mg/L | 1 | 9/21/2022 11:35:57 AM | 70299 |
| Selenium | ND | 0.00037 | 0.0010 | | mg/L | 1 | 9/21/2022 11:35:57 AM | 70299 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:12:07 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 9-15-22

Project: 2022 GW Sampling 3rd Quarter

Collection Date: 9/15/2022

Lab ID: 2209816-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.55 | 0.0011 | 0.0020 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Beryllium | ND | 0.00088 | 0.0020 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Cobalt | 0.0046 | 0.0024 | 0.0060 | J | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Nickel | 0.043 | 0.0033 | 0.010 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 9/28/2022 2:07:40 PM | A91392 |
| Vanadium | 0.0025 | 0.0017 | 0.050 | J | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| Zinc | 0.013 | 0.0032 | 0.010 | | mg/L | 1 | 9/27/2022 4:58:14 PM | C91347 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 9/19/2022 12:17:42 PM | A91132 |
| Arsenic | 0.0012 | 0.00012 | 0.0010 | | mg/L | 1 | 9/19/2022 12:17:42 PM | A91132 |
| Lead | 0.00013 | 0.000057 | 0.00050 | J | mg/L | 1 | 9/19/2022 12:17:42 PM | A91132 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 9/19/2022 12:17:42 PM | A91132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 9/21/2022 3:14:17 PM | 70307 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209816-008A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: BRM | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Acetone | 2.7 | 2.5 | 10 | J | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| tert-Butyl alcohol | ND | 16 | 25 | | µg/L | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Surr: Dibromofluoromethane | 109 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:36:39 PM | A91114 |
| Surr: Toluene-d8 | 95.7 | 0 | 70-130 | | %Rec | 1 | 9/16/2022 6:36:39 PM | A91114 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |

Analytical Report

Lab Order: 2209816

Date Reported: 10/4/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 3rd Quarter

Collection Date:

Lab ID: 2209816-008B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 9/22/2022 5:00:44 PM | 70321 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|--|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Estimated value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of range due to dilution or matrix interference | | |
| | | | | |



ANALYTICAL REPORT

September 28, 2022

Revised Report

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1537669

Samples Received: 09/20/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2209816-001F EB-09-15-22 L1537669-01 | 5 | |
| 2209816-002F MKTF-16 L1537669-02 | 6 | ⁴ Cn |
| 2209816-003F OW-12A L1537669-03 | 7 | ⁵ Sr |
| 2209816-004F OW-70 L1537669-04 | 8 | |
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| Qc: Quality Control Summary | 11 | ⁷ Gl |
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| Gl: Glossary of Terms | 12 | |
| Al: Accreditations & Locations | 13 | ⁹ Sc |
| Sc: Sample Chain of Custody | 14 | |

SAMPLE SUMMARY

2209816-001F EB-09-15-22 L1537669-01 WW

Collected by
Collected date/time
Received date/time

09/15/22 08:15 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:07 | LDT | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2209816-002F MKTF-16 L1537669-02 WW

Collected by
Collected date/time
Received date/time

09/15/22 08:45 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:11 | LDT | Mt. Juliet, TN |

2209816-003F OW-12A L1537669-03 WW

Collected by
Collected date/time
Received date/time

09/15/22 09:30 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:12 | LDT | Mt. Juliet, TN |

2209816-004F OW-70 L1537669-04 WW

Collected by
Collected date/time
Received date/time

09/15/22 09:55 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:13 | LDT | Mt. Juliet, TN |

2209816-005F OW-57 L1537669-05 WW

Collected by
Collected date/time
Received date/time

09/15/22 10:25 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:14 | LDT | Mt. Juliet, TN |

2209816-007F DUP 9-15-22 L1537669-06 WW

Collected by
Collected date/time
Received date/time

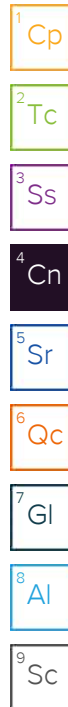
09/15/22 00:00 09/20/22 09:15

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1929558 | 1 | 09/23/22 11:57 | 09/23/22 21:15 | LDT | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Report Revision History

Level II Report - Version 1: 09/26/22 15:48

Project Narrative

Reprint to correct sample ID

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:07 | WG1929558 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:11 | WG1929558 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 09/15/22 09:30

L1537669

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:12 | WG1929558 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 09/15/22 09:55

L1537669

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:13 | WG1929558 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:14 | WG1929558 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 09/23/2022 21:15 | WG1929558 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Method Blank (MB)

(MB) R3840867-1 09/23/22 20:46

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1537669-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1537669-01 09/23/22 21:07 • (DUP) R3840867-5 09/23/22 21:08

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1537686-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1537686-01 09/23/22 21:16 • (DUP) R3840867-6 09/23/22 21:17

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3840867-2 09/23/22 20:47

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0923 | 92.3 | 87.1-120 | |

L1537432-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1537432-01 09/23/22 20:51 • (MS) R3840867-3 09/23/22 20:52 • (MSD) R3840867-4 09/23/22 20:53

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0917 | 0.0900 | 91.7 | 90.0 | 1 | 90.0-110 | | | 1.87 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|-----------|-------------|
|-----------|-------------|

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

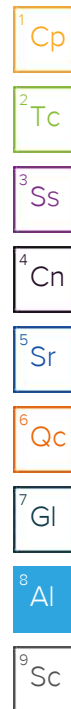
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

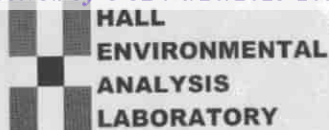
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





J190

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory Page 3602 of 5177

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|-----------------------|--------------|-----------------------------|
| 1 | 2209816-001F | EB-09-15-22 | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 8:15:00 AM | 1 | Total Cyanide J and MDL -91 |
| 2 | 2209816-002F | MKTF-16 | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 8:45:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2209816-003F | OW-12A | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2209816-004F | OW-70 | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 9:55:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2209816-005F | OW-57 | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 10:25:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2209816-007F | DUP 9-15-22 | 500AMBHDP
F.NAOW | Groundw
star | 9/15/2022 | 1 | Total Cyanide J and MDL -06 |

L1537669

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☒ N If Applicable
 COC Signed/Accurate: ☒ Y ☒ N VOA Zero Headspace: ☒ Y ☒ N
 Bottles arrive intact: ☒ Y ☒ N Pres. Correct/Check: ☒ Y ☒ N
 Correct bottles used: ☒ Y ☒ N
 Sufficient volume sent: ☒ Y ☒ N
 RAD Screen <0.5 mR/hr: ☒ Y ☒ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

temp: 5.7+0.5.7 Hrk #: 5755 8089 3973

| | | | | | | | |
|---|------------------------|----------------------|---------------------------|--------------------|-------------------|--|--|
| Relinquished By: <i>Com</i> | Date: 9/16/2022 | Time: 8:38 AM | Received By: <i>Cathy</i> | Date: 09/20 | Time: 0915 | REPORT TRANSMITTAL DESIRED:
☐ HARD COPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples _____ °C Attempt to Cool? _____ | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|---------------------------------|---|
| Sample ID: MB-70299 | SampType: MBLK | TestCode: EPA Method 200.7: Metals |
| Client ID: PBW | Batch ID: 70299 | RunNo: 91216 |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | SeqNo: 3263482 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|--------|-----------|-------------|------|----------|-----------|------|----------|------|
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Iron | ND | 0.050 | | | | | | | | |
| Manganese | ND | 0.0020 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | |
|-------------------------------|---------------------------------|---|
| Sample ID: LCSLL-70299 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals |
| Client ID: BatchQC | Batch ID: 70299 | RunNo: 91216 |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | SeqNo: 3263483 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|--------|-----------|-------------|------|----------|-----------|------|----------|------|
| Barium | 0.0026 | 0.0030 | 0.002000 | 0 | 129 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 100 | 50 | 150 | | | |
| Cadmium | 0.0024 | 0.0020 | 0.002000 | 0 | 121 | 50 | 150 | | | |
| Chromium | 0.0074 | 0.0060 | 0.006000 | 0 | 124 | 50 | 150 | | | |
| Cobalt | 0.0084 | 0.0060 | 0.006000 | 0 | 141 | 50 | 150 | | | |
| Iron | 0.023 | 0.050 | 0.02000 | 0 | 116 | 50 | 150 | | | J |
| Manganese | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0059 | 0.010 | 0.005000 | 0 | 117 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 101 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 107 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 109 | 50 | 150 | | | |

| | | |
|-----------------------------|---------------------------------|---|
| Sample ID: LCS-70299 | SampType: LCS | TestCode: EPA Method 200.7: Metals |
| Client ID: LCSW | Batch ID: 70299 | RunNo: 91216 |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | SeqNo: 3263484 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|-----------|--------|--------|-----------|-------------|------|----------|-----------|------|----------|------|
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Iron | 0.50 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| Sample ID: LCS-70299 | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70299 | | RunNo: 91216 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263484 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Manganese | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.2 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

| Sample ID: MB-70299 | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70299 | | RunNo: 91216 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263608 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

| Sample ID: LCSLL-70299 | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | | |
|-------------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70299 | | RunNo: 91216 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263610 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |

| Sample ID: LCS-70299 | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70299 | | RunNo: 91216 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3263612 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |

| Sample ID: MB-70359 | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | | |
|-----------------------------|---------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70359 | | RunNo: 91277 | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | | SeqNo: 3266355 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: LCSLL-70359 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70359 | RunNo: 91277 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266356 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 106 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.0 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.5 | 50 | 150 | | | J |
| Chromium | 0.0055 | 0.0060 | 0.006000 | 0 | 91.6 | 50 | 150 | | | J |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 99.8 | 50 | 150 | | | J |
| Vanadium | 0.0093 | 0.050 | 0.01000 | 0 | 92.6 | 50 | 150 | | | J |
| Zinc | 0.0097 | 0.010 | 0.01000 | 0 | 97.0 | 50 | 150 | | | J |

| Sample ID: LCS-70359 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70359 | RunNo: 91277 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/23/2022 | SeqNo: 3266357 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.3 | 85 | 115 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 97.0 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 94.2 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 97.4 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 93.4 | 85 | 115 | | | |

| Sample ID: MB-70359 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70359 | RunNo: 91312 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268088 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-70359 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 70359 | RunNo: 91312 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268089 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.0044 | 0.010 | 0.005000 | 0 | 87.9 | 50 | 150 | | | J |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-70359 | | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70359 | | RunNo: 91312 | | | | | | |
| Prep Date: 9/22/2022 | | Analysis Date: 9/26/2022 | | SeqNo: 3268090 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269825 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Iron | ND | 0.020 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269826 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0014 | 0.0020 | 0.002000 | 0 | 70.7 | 50 | 150 | | | J |
| Beryllium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.4 | 50 | 150 | | | J |
| Cadmium | 0.0025 | 0.0020 | 0.002000 | 0 | 124 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 100 | 50 | 150 | | | |
| Cobalt | 0.0053 | 0.0060 | 0.006000 | 0 | 88.2 | 50 | 150 | | | J |
| Iron | 0.021 | 0.020 | 0.02000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 114 | 50 | 150 | | | J |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 103 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C91347 | RunNo: 91347 | | | | | | | | |
| Prep Date: | Analysis Date: 9/27/2022 | SeqNo: 3269827 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 98.4 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.8 | 85 | 115 | | | |
| Iron | 0.49 | 0.020 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271799 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | ND | 0.0050 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271800 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.1 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271801 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.8 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209816-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-09-15-22 | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271827 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 94.5 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2209816-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-09-15-22 | Batch ID: A91392 | RunNo: 91392 | | | | | | | | |
| Prep Date: | Analysis Date: 9/28/2022 | SeqNo: 3271828 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Silver | 0.093 | 0.0050 | 0.1000 | 0 | 92.6 | 70 | 130 | 2.03 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: A91132 | | RunNo: 91132 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260243 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A91132 | | RunNo: 91132 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260244 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00046 | 0.00050 | 0.0005000 | 0 | 92.3 | 50 | 150 | | | J |
| Selenium | 0.00086 | 0.0010 | 0.001000 | 0 | 85.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A91132 | | RunNo: 91132 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260245 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.5 | 85 | 115 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 92.1 | 85 | 115 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 89.9 | 85 | 115 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 87.9 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70299 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 70299 | | RunNo: 91194 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3262810 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-70299 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 70299 | | RunNo: 91194 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | | SeqNo: 3262811 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MSLCSLL-70299 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
|---------------------------------|---------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Client ID: BatchQC | | Batch ID: 70299 | | | RunNo: 91194 | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/21/2022 | | | SeqNo: 3262811 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00053 | 0.00050 | 0.0005000 | 0 | 107 | 50 | 150 | | | |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|---------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-70299 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 70299 | | | RunNo: 91194 | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/21/2022 | | | SeqNo: 3262812 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 105 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|--|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209816-002DMSLL SampType: MS TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: MKTF-16 | | Batch ID: 70299 | | | RunNo: 91194 | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/21/2022 | | | SeqNo: 3262834 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.032 | 0.0010 | 0.02500 | 0.009342 | 92.0 | 70 | 130 | | | |
| Selenium | 0.032 | 0.0010 | 0.02500 | 0.009173 | 91.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--------|--------------------------|-----------|-------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209816-002DMSDL SampType: MSD TestCode: EPA 200.8: Metals | | | | | | | | | | |
| Client ID: MKTF-16 | | Batch ID: 70299 | | | RunNo: 91194 | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/21/2022 | | | SeqNo: 3262835 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.033 | 0.0010 | 0.02500 | 0.009342 | 94.8 | 70 | 130 | 2.13 | 20 | |
| Selenium | 0.031 | 0.0010 | 0.02500 | 0.009173 | 85.9 | 70 | 130 | 4.82 | 20 | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2209816-003DMSLL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: OW-12A | | Batch ID: 70299 | | | RunNo: 91194 | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/21/2022 | | | SeqNo: 3262837 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.021 | 0.0010 | 0.02500 | 0 | 82.5 | 70 | 130 | | | |
| Arsenic | 0.035 | 0.0010 | 0.02500 | 0.009711 | 101 | 70 | 130 | | | |
| Lead | 0.023 | 0.00050 | 0.01250 | 0.01171 | 93.2 | 70 | 130 | | | |
| Selenium | 0.030 | 0.0010 | 0.02500 | 0.001795 | 111 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: 2209816-002DMSLL | SampType: MS | TestCode: EPA 200.8: Metals |
| Client ID: MKTF-16 | Batch ID: 70299 | RunNo: 91194 |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | SeqNo: 3262849 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.064 | 0.0025 0.01250 0.05204 96.6 70 130 |

| | | |
|-----------------------------|--------------------------|--|
| Sample ID: 2209816-002DMSDL | SampType: MSD | TestCode: EPA 200.8: Metals |
| Client ID: MKTF-16 | Batch ID: 70299 | RunNo: 91194 |
| Prep Date: 9/20/2022 | Analysis Date: 9/21/2022 | SeqNo: 3262850 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | 0.062 | 0.0025 0.01250 0.05204 77.9 70 130 3.72 20 |

| | | |
|----------------------|--------------------------|--|
| Sample ID: MB-70359 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 70359 | RunNo: 91299 |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267421 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|--------------------------|--------------------------|--|
| Sample ID: MSLCSLL-70359 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 70359 | RunNo: 91299 |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267422 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0012 | 0.0010 0.001000 0 118 50 150 |
| Arsenic | 0.00093 | 0.0010 0.001000 0 92.8 50 150 J |
| Lead | 0.00055 | 0.00050 0.0005000 0 109 50 150 |
| Selenium | 0.00098 | 0.0010 0.001000 0 97.6 50 150 J |

| | | |
|------------------------|--------------------------|--|
| Sample ID: MSLCS-70359 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 70359 | RunNo: 91299 |
| Prep Date: 9/22/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267423 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.025 | 0.0010 0.02500 0 101 85 115 |
| Arsenic | 0.024 | 0.0010 0.02500 0 97.7 85 115 |
| Lead | 0.013 | 0.00050 0.01250 0 104 85 115 |
| Selenium | 0.026 | 0.0010 0.02500 0 103 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A91132 | RunNo: 91132 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260247 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A91132 | RunNo: 91132 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260248 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00046 | 0.00050 | 0.0005000 | 0 | 92.3 | 50 | 150 | | | J |
| Selenium | 0.00086 | 0.0010 | 0.001000 | 0 | 85.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A91132 | RunNo: 91132 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260249 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.5 | 85 | 115 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 92.1 | 85 | 115 | | | |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 89.9 | 85 | 115 | | | |
| Selenium | 0.022 | 0.0010 | 0.02500 | 0 | 87.9 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-70307 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 70307 | RunNo: 91203 |
| Prep Date: 9/21/2022 | Analysis Date: 9/21/2022 | SeqNo: 3262985 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-70307 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 70307 | RunNo: 91203 |
| Prep Date: 9/21/2022 | Analysis Date: 9/21/2022 | SeqNo: 3262986 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00014 | 0.00020 0.0001500 0 94.4 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-70307 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 70307 | RunNo: 91203 |
| Prep Date: 9/21/2022 | Analysis Date: 9/21/2022 | SeqNo: 3263004 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 | 0.00020 0.005000 0 106 85 115 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-70391 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 70391 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267755 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-70391 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 70391 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267756 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00013 | 0.00020 0.0001500 0 83.7 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-70391 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 70391 | RunNo: 91309 |
| Prep Date: 9/26/2022 | Analysis Date: 9/26/2022 | SeqNo: 3267757 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0052 | 0.00020 0.005000 0 103 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: PBW | Batch ID: R91119 | RunNo: 91119 | | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | SeqNo: 3259698 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA Method 300.0: Anions | | | | | | | | |
| Client ID: LCSW | Batch ID: R91119 | RunNo: 91119 | | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | SeqNo: 3259706 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 4.8 | 0.50 | 5.000 | 0 | 95.6 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.99 | 0.10 | 1.000 | 0 | 99.3 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.6 | 0.10 | 2.500 | 0 | 103 | 90 | 110 | | | |
| Sulfate | 9.9 | 0.50 | 10.00 | 0 | 99.1 | 90 | 110 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-70321 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70321 | RunNo: 91221 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265488 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-70321 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: PBW | Batch ID: 70321 | RunNo: 91221 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265489 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-70321 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSW | Batch ID: 70321 | RunNo: 91221 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265491 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.097 | 0.010 | 0.1000 | 0 | 96.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcsd-70321 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70321 | RunNo: 91221 | | | | | | | | |
| Prep Date: 9/22/2022 | Analysis Date: 9/22/2022 | SeqNo: 3265492 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,2-Dibromoethane | 0.094 | 0.010 | 0.1000 | 0 | 94.2 | 70 | 130 | 2.71 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E Estimated value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-70323 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269062 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.021 | 0.064 | | | | | | | | J |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.042 | | 0.03750 | | 112 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70323 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269063 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.12 | 0.064 | 0.1875 | 0 | 64.3 | 31.7 | 75.4 | | | |
| Surr: DNOP | 0.020 | | 0.01875 | | 105 | 42.2 | 138 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-70323 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70323 | | RunNo: 91330 | | | | | | | |
| Prep Date: 9/21/2022 | Analysis Date: 9/26/2022 | | SeqNo: 3269064 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.11 | 0.064 | 0.1875 | 0 | 57.3 | 31.7 | 75.4 | 11.4 | 20 | |
| Surr: DNOP | 0.018 | | 0.01875 | | 93.7 | 42.2 | 138 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb2 | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: B91113 | | RunNo: 91113 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259475 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 20 | | 20.00 | | 100 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: C91131 | | RunNo: 91131 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260221 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 97.0 | 80 | 120 | | | |
| Surr: BFB | 44 | | 20.00 | | 221 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: C91131 | | RunNo: 91131 | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | SeqNo: 3260222 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 103 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A91114 | | RunNo: 91114 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259529 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.5 | | 10.00 | | 94.7 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A91114 | | RunNo: 91114 | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | | SeqNo: 3259538 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: A91114 | RunNo: 91114 | | | | | | | | |
| Prep Date: | Analysis Date: 9/16/2022 | SeqNo: 3259538 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R91137 | RunNo: 91137 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260411 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.6 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 96.4 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.2 | | 10.00 | | 92.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R91137 | RunNo: 91137 | | | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | SeqNo: 3260431 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R91137 | | | RunNo: 91137 | | | | | | |
| Prep Date: | Analysis Date: 9/19/2022 | | | SeqNo: 3260431 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| Sample ID: MB-70290 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 70290 | RunNo: 91381 | | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/28/2022 | SeqNo: 3271742 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 130 | | 200.0 | | 64.1 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 99 | | 200.0 | | 49.6 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.4 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 76 | | 100.0 | | 76.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 71 | | 100.0 | | 71.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 88 | | 100.0 | | 88.0 | 34.4 | 134 | | | |

| Sample ID: LCS-70290 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 70290 | RunNo: 91381 | | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/28/2022 | SeqNo: 3271743 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-70290 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 70290 | | RunNo: 91381 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/28/2022 | | SeqNo: 3271743 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 72 | 10 | 100.0 | 0 | 72.4 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 64 | 5.0 | 100.0 | 0 | 64.4 | 15 | 89.8 | | | |
| Phenol | 98 | 20 | 200.0 | 0 | 49.1 | 17 | 61.1 | | | |
| Pyrene | 81 | 10 | 100.0 | 0 | 81.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 54.2 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 87 | | 200.0 | | 43.3 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 67.2 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.6 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 70 | | 100.0 | | 69.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: LCSD-70290 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 70290 | | RunNo: 91381 | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/28/2022 | | SeqNo: 3271744 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 62 | 10 | 100.0 | 0 | 61.5 | 21.3 | 104 | 16.3 | 45.3 | |
| 1,4-Dichlorobenzene | 58 | 5.0 | 100.0 | 0 | 58.3 | 15 | 89.8 | 9.89 | 39.6 | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.3 | 17 | 61.1 | 24.6 | 42.5 | |
| Pyrene | 81 | 10 | 100.0 | 0 | 80.7 | 61 | 123 | 0.468 | 11.8 | |
| Surr: 2-Fluorophenol | 50 | | 200.0 | | 24.8 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 71 | | 200.0 | | 35.6 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 63 | | 200.0 | | 31.5 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.9 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 60.7 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb-70290 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: PBW | Batch ID: 70290 | RunNo: 91314 | | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268188 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.30 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 66.7 | 31.6 | 100 | | | |
| Surr: 2,4,6-Tribromophenol | 80 | | 200.0 | | 40.0 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 61.7 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 68 | | 100.0 | | 67.6 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-70290 lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
| Client ID: LCSW | Batch ID: 70290 | RunNo: 91314 | | | | | | | | |
| Prep Date: 9/20/2022 | Analysis Date: 9/26/2022 | SeqNo: 3268189 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 0.10 | 2.000 | 0 | 31.0 | 15 | 60.5 | | | |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 15 | 92 | | | |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 15 | 96 | | | |
| Phenanthrene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 21 | 103 | | | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 32.8 | 119 | | | |
| Pyrene | 1.2 | 1.0 | 2.000 | 0 | 59.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 32 | 132 | | | |
| Chrysene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.4 | 31.6 | 100 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2209816

04-Oct-22

Client: Marathon

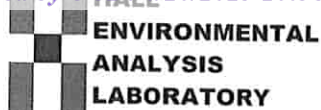
Project: 2022 GW Sampling 3rd Quarter

| | | | | | | | | | | |
|--------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: Ics-70290 If | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 70290 | | RunNo: 91314 | | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/26/2022 | | SeqNo: 3268189 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.6 | 22 | 101 | | | |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.8 | 26.7 | 90.1 | | | |
| Surr: 4-Terphenyl-d14 | 64 | | 100.0 | | 64.2 | 72.3 | 147 | | | S |

| | | | | | | | | | | |
|---------------------------------|--------|---------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: Icsd-70290 If | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | | Batch ID: 70290 | | RunNo: 91314 | | | | | | |
| Prep Date: 9/20/2022 | | Analysis Date: 9/26/2022 | | SeqNo: 3268190 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 0.10 | 2.000 | 0 | 34.0 | 15 | 60.5 | 9.23 | 29.7 | |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 15 | 78.3 | 5.83 | 31.7 | |
| 1-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 15 | 79.6 | 5.94 | 31.4 | |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 15 | 78.6 | 5.94 | 30.5 | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 92 | 3.70 | 30.5 | |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 96 | 5.41 | 25.1 | |
| Phenanthrene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 21 | 103 | 3.57 | 26.4 | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 59.0 | 21.1 | 106 | 1.71 | 14.4 | |
| Fluoranthene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 32.8 | 119 | 0 | 14.8 | |
| Pyrene | 1.2 | 1.0 | 2.000 | 0 | 59.0 | 34.1 | 110 | 0 | 19.2 | |
| Benz(a)anthracene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 32 | 132 | 4.58 | 29.3 | |
| Chrysene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 31.3 | 112 | 3.28 | 19 | |
| Benzo(b)fluoranthene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 34.1 | 119 | 5.97 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 24.7 | 152 | 4.82 | 21.3 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 65.8 | 31.6 | 100 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 79 | | 200.0 | | 39.3 | 22 | 101 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 100.0 | | 61.4 | 26.7 | 90.1 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 60 | | 100.0 | | 60.1 | 72.3 | 147 | 0 | 0 | S |

Qualifiers:

| | | | |
|-----|--|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Estimated value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of range due to dilution or matrix interference | | |



Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2209816

RcptNo: 1

Received By: Joseph Alderette

9/16/2022 7:45:00 AM

Completed By: Cheyenne Cason

9/16/2022 8:14:18 AM

Reviewed By: *JC 9-16-22*Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐ *yn 9/16/22*
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

35
<2 or >12 unless noted

Adjusted? *yes*Checked by: *yn 9/16/22*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

0.5ml of HNO3 was added to sample 003D for pH < 2.

17. Cooler Information

1.0ml of HNO3 was added to sample 005D for pH < 2.

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.4 | Good | Yes | | | |
| 2 | 1.3 | Good | Yes | | | |
| 3 | 0.4 | Good | Yes | | | |

*yn 9/16/22**MKTF-16 - No bottle for DRD*

Chain-of-Custody Record

Marathon Gallup Refinery

Address: 92 Giant Crossing Road

Jamestown, NM, 87347

808-640-1823

Fax#:

Package:

Level 4 (Full Validation)

Az Compliance

Other

C

(Type)

Turn-Around Time:

X Standard Rush

Project Name:

2022 GW Sampling 3rd Quarter

Project #: 697-080-001

Project Manager:

Lesli Alexander/Mackensie Swift

Sampler:

On Ice: Yes No

of Coolers: 3

Cooler Temp (including CIP): See Remarks

Container

Type and #

HEAL No.

Preservative

Type

Type

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|----------|----------------------------------|----|------------|
| MKTF-02R | <u>VOCs:</u> | | |
| MKTF-04R | TBA | 19 | 8260B |
| MKTF-09 | | | |
| MKTF-10 | <u>General Chemistry:</u> | | |
| MKTF-13 | Chloride | 19 | 300.0 |
| MKTF-16 | Nitrate | 19 | 300.0 |
| MKTF-17R | Nitrite | 19 | 300.0 |
| MKTF-19 | Sulfate | 19 | 300.0 |
| MKTF-20 | Sulfide | 19 | SM4500S2 D |
| MKTF-21 | | | |
| MKTF-22 | <u>Metals:</u> | | |
| MKTF-24 | Ferrous Iron (dissolved) | 19 | 200.7 |
| MKTF-25 | Ferric Iron (total) | 19 | 200.7 |
| DUP-1 | Total Manganese | 19 | 200.7 |
| DUP-2 | | | |
| EB-1 | | | |
| EB-2 | | | |
| FB-1 | | | |
| FB-2 | | | |
| MKTF-02R | <u>VOCs:</u> | | |
| MKTF-10 | Ethene | 4 | RSK175 |
| MKTF-24 | Ethane | 4 | RSK175 |
| MKTF-25 | Methane | 4 | RSK175 |



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix C-4. 4th Quarter Analytical Reports



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 12, 2023

Emily Conkling
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212A11

Dear Emily Conkling:

Hall Environmental Analysis Laboratory received 7 sample(s) on 12/16/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212A11
Date: 1/12/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 9:30:00 AM

Lab ID: 2212A11-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/27/2022 1:17:45 PM | B93549 |
| Surr: BFB | 94.1 | 0 | 70-130 | | %Rec | 1 | 12/27/2022 1:17:45 PM | B93549 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 97.7 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Surr: 4-Bromofluorobenzene | 111 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Surr: Dibromofluoromethane | 97.3 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:11:27 PM | R93599 |
| Surr: Toluene-d8 | 109 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:11:27 PM | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 9:30:00 AM

Lab ID: 2212A11-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 12/27/2022 4:27:35 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 9:30:00 AM

Lab ID: 2212A11-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.030 | 0.016 | 0.064 | JB | mg/L | 1 | 12/22/2022 9:21:47 PM | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 9:21:47 PM | 72199 |
| Surr: DNOP | 105 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 9:21:47 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: 2-Fluorophenol | 40.1 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: Phenol-d5 | 31.6 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 62.0 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: Nitrobenzene-d5 | 54.0 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 48.9 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 86.3 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 6:31:58 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 3:23:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** EB-12-15-22**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/15/2022 9:30:00 AM**Lab ID:** 2212A11-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.8 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 52.2 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 3:23:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 3:23:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 9:30:00 AM

Lab ID: 2212A11-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 8:37:09 PM | 72221 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:39:01 PM | 72221 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:39:01 PM | 72221 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:39:01 PM | 72221 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/21/2022 4:39:01 PM | 72221 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000099 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/23/2022 1:35:37 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 9:30:00 AM

Lab ID: 2212A11-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:39:44 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/27/2022 1:12:41 PM | A93556 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 12/20/2022 2:50:15 PM | A93438 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/20/2022 2:50:15 PM | A93438 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/20/2022 2:50:15 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000097 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/23/2022 1:37:46 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:00:00 AM

Lab ID: 2212A11-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.020 | 0.0090 | 0.050 | J | mg/L | 1 | 12/27/2022 1:41:09 PM | B93549 |
| Surr: BFB | 91.5 | 0 | 70-130 | | %Rec | 1 | 12/27/2022 1:41:09 PM | B93549 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Methyl tert-butyl ether (MTBE) | 4.2 | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,2-Dichloroethane (EDC) | 1.2 | 0.25 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| cis-1,2-DCE | 1.6 | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,1-Dichloroethane | 24 | 0.27 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,1-Dichloroethene | 1.4 | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Trichloroethene (TCE) | 0.95 | 0.20 | 1.0 | J | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Surr: 4-Bromofluorobenzene | 109 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Surr: Dibromofluoromethane | 98.9 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:40:01 PM | R93599 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 6:40:01 PM | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212A11-002B

Client Sample ID: MKTF-30

Collection Date: 12/15/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/27/2022 4:57:41 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:00:00 AM

Lab ID: 2212A11-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.33 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 9:45:40 PM | 72199 |
| Motor Oil Range Organics (MRO) | 0.098 | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 9:45:40 PM | 72199 |
| Surr: DNOP | 112 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 9:45:40 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: 2-Fluorophenol | 32.6 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: Phenol-d5 | 18.1 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 69.7 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: Nitrobenzene-d5 | 60.8 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 51.8 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 81.9 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 7:12:45 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 14 | 0.11 | 1.0 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 4:07:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-30**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/15/2022 10:00:00 AM**Lab ID:** 2212A11-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.4 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 47.0 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 4:07:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 76.1 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 4:07:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:00:00 AM

Lab ID: 2212A11-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.15 | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Beryllium | 0.00081 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Chromium | 0.0054 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Nickel | 0.024 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Silver | 0.0021 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| Zinc | 0.0096 | 0.0039 | 0.010 | J | mg/L | 1 | 12/21/2022 8:47:37 PM | 72221 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 5:54:57 PM | 72221 |
| Arsenic | ND | 0.0011 | 0.0050 | | mg/L | 5 | 12/21/2022 5:54:57 PM | 72221 |
| Lead | 0.0039 | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:41:28 PM | 72221 |
| Selenium | ND | 0.0044 | 0.0050 | | mg/L | 5 | 12/21/2022 5:54:57 PM | 72221 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:39:57 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:00:00 AM

Lab ID: 2212A11-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.029 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Nickel | 0.013 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Vanadium | 0.0031 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:47:11 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/27/2022 1:22:56 PM | A93556 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 12/20/2022 5:33:50 PM | A93438 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 5:33:50 PM | A93438 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 5:33:50 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:46:19 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:30:00 AM

Lab ID: 2212A11-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/27/2022 2:04:35 PM | B93549 |
| Surr: BFB | 91.4 | 0 | 70-130 | | %Rec | 1 | 12/27/2022 2:04:35 PM | B93549 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Surr: 4-Bromofluorobenzene | 111 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Surr: Dibromofluoromethane | 98.0 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 8:06:07 PM | R93599 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 8:06:07 PM | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:30:00 AM

Lab ID: 2212A11-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/27/2022 5:12:45 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:30:00 AM

Lab ID: 2212A11-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 10:09:31 P | 72199 |
| Motor Oil Range Organics (MRO) | 0.074 | 0.052 | 0.080 | J | mg/L | 1 | 12/22/2022 10:09:31 P | 72199 |
| Surr: DNOP | 115 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 10:09:31 P | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: 2-Fluorophenol | 41.2 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: Phenol-d5 | 33.2 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 66.1 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: Nitrobenzene-d5 | 52.6 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 43.0 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 84.2 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 7:54:18 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.12 | 0.11 | 1.0 | J | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 4:51:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2212A11**Date Reported: **1/12/2023****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** STP-1-NW**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/15/2022 10:30:00 AM**Lab ID:** 2212A11-003C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 50.5 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 43.4 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 4:51:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 89.5 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 4:51:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:30:00 AM

Lab ID: 2212A11-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|--------------|
| EPA METHOD 200.7: METALS | | | | | | | | Analyst: VP |
| Barium | 0.098 | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Chromium | 0.0023 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Silver | 0.0022 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Vanadium | 0.028 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 8:51:55 PM | 72221 |
| EPA 200.8: METALS | | | | | | | | Analyst: bcv |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 5:57:23 PM | 72221 |
| Arsenic | 0.0018 | 0.0011 | 0.0050 | J | mg/L | 5 | 12/21/2022 5:57:23 PM | 72221 |
| Lead | ND | 0.00097 | 0.0025 | | mg/L | 5 | 12/21/2022 5:57:23 PM | 72221 |
| Selenium | 0.0093 | 0.0044 | 0.0050 | | mg/L | 5 | 12/21/2022 5:57:23 PM | 72221 |
| EPA METHOD 245.1: MERCURY | | | | | | | | Analyst: VP |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:48:27 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1-NW

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 10:30:00 AM

Lab ID: 2212A11-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.063 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Vanadium | 0.039 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:57:43 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/27/2022 2:09:01 PM | A93556 |
| Arsenic | 0.0022 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 5:44:02 PM | A93438 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 5:44:02 PM | A93438 |
| Selenium | 0.0073 | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 5:44:02 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:50:35 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.44 | 0.0090 | 0.050 | | mg/L | 1 | 12/27/2022 2:28:11 PM | B93549 |
| Surr: BFB | 164 | 0 | 70-130 | S | %Rec | 1 | 12/27/2022 2:28:11 PM | B93549 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 37 | 1.1 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Ethylbenzene | 4.6 | 1.1 | 5.0 | J | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Methyl tert-butyl ether (MTBE) | 330 | 2.0 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.61 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Isopropylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| n-Propylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 105 | 0 | 70-130 | | %Rec | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Surr: Dibromofluoromethane | 96.3 | 0 | 70-130 | | %Rec | 5 | 12/28/2022 8:34:50 PM | R93599 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 5 | 12/28/2022 8:34:50 PM | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/27/2022 5:27:47 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 8.3 | 0.080 | 0.32 | B | mg/L | 5 | 12/22/2022 10:33:23 P | 72199 |
| Motor Oil Range Organics (MRO) | 1.0 | 0.26 | 0.40 | | mg/L | 5 | 12/22/2022 10:33:23 P | 72199 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 5 | 12/22/2022 10:33:23 P | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 180 | 200 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 84 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Di-n-butyl phthalate | ND | 77 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Di-n-octyl phthalate | ND | 120 | 200 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 24 | 50 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Diethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Dimethyl phthalate | ND | 60 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 2,4-Dimethylphenol | ND | 58 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 2,4-Dinitrophenol | ND | 160 | 200 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 2-Methylphenol | ND | 50 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 3+4-Methylphenol | ND | 51 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Phenol | ND | 180 | 200 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Pyridine | ND | 140 | 400 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 59 | 100 | D | µg/L | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 0 | 0 | 15-108 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: Nitrobenzene-d5 | 0 | 0 | 16.8-112 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 0 | 0 | 15-101 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 0 | 0 | 34.4-134 | SD | %Rec | 10 | 12/21/2022 8:35:06 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 1.1 | 10 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Naphthalene | ND | 2.0 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| 1-Methylnaphthalene | 3.0 | 1.5 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 1.4 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Acenaphthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Fluorene | ND | 0.95 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Phenanthrene | ND | 1.6 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Anthracene | ND | 1.4 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Fluoranthene | ND | 1.4 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Pyrene | ND | 3.2 | 10 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Benz(a)anthracene | ND | 1.5 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Chrysene | ND | 2.5 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 1.4 | 4.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 2.3 | 3.0 | D | µg/L | 10 | 12/21/2022 5:35:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2212A11**Date Reported: **1/12/2023****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** OPIS-1**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/15/2022 11:10:00 AM**Lab ID:** 2212A11-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 54.1 | 0 | 15-108 | D | %Rec | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 49.8 | 0 | 15-107 | D | %Rec | 10 | 12/21/2022 5:35:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 71.6 | 0 | 15-166 | D | %Rec | 10 | 12/21/2022 5:35:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.86 | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Cobalt | 0.0048 | 0.0035 | 0.0060 | J | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Nickel | 0.18 | 0.0053 | 0.010 | * | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Silver | 0.0019 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Vanadium | 0.018 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| Zinc | 0.0079 | 0.0039 | 0.010 | J | mg/L | 1 | 12/21/2022 8:56:09 PM | 72221 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 5:59:50 PM | 72221 |
| Arsenic | 0.0044 | 0.0011 | 0.0050 | J | mg/L | 5 | 12/21/2022 5:59:50 PM | 72221 |
| Lead | 0.0046 | 0.00097 | 0.0025 | | mg/L | 5 | 12/21/2022 5:59:50 PM | 72221 |
| Selenium | 0.0045 | 0.0044 | 0.0050 | J | mg/L | 5 | 12/21/2022 5:59:50 PM | 72221 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:52:43 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OPIS-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.71 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Cobalt | 0.0041 | 0.0024 | 0.0060 | J | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Nickel | 0.15 | 0.0033 | 0.010 | * | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Silver | 0.0019 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Vanadium | 0.010 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| Zinc | 0.0097 | 0.0032 | 0.010 | J | mg/L | 1 | 12/23/2022 4:49:46 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0032 | 0.0022 | 0.0050 | J | mg/L | 5 | 12/27/2022 2:19:15 PM | A93556 |
| Arsenic | 0.0043 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 5:49:07 PM | A93438 |
| Lead | 0.0030 | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 5:49:07 PM | A93438 |
| Selenium | 0.0022 | 0.0017 | 0.0050 | J | mg/L | 5 | 12/20/2022 5:49:07 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:54:50 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022 11:10:00 AM

Lab ID: 2212A11-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/29/2022 12:23:53 A | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 98.7 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:23:53 A | R93599 |
| Surr: 4-Bromofluorobenzene | 113 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:23:53 A | R93599 |
| Surr: Dibromofluoromethane | 95.0 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:23:53 A | R93599 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:23:53 A | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022

Lab ID: 2212A11-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/27/2022 3:15:20 PM | B93549 |
| Surr: BFB | 91.8 | 0 | 70-130 | | %Rec | 1 | 12/27/2022 3:15:20 PM | B93549 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:42:43 PM | R93599 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:42:43 PM | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022

Lab ID: 2212A11-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/27/2022 5:42:48 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022

Lab ID: 2212A11-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 10:57:06 P | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 10:57:06 P | 72199 |
| Surr: DNOP | 108 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 10:57:06 P | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: 2-Fluorophenol | 34.4 | 0 | 15-84.5 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: Phenol-d5 | 27.7 | 0 | 15-67 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: 2,4,6-Tribromophenol | 55.9 | 0 | 15-108 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: Nitrobenzene-d5 | 48.7 | 0 | 16.8-112 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: 2-Fluorobiphenyl | 43.0 | 0 | 15-101 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| Surr: 4-Terphenyl-d14 | 71.0 | 0 | 34.4-134 | | %Rec | 1 | 1/6/2023 4:14:22 PM | 72239 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.12 | 0.11 | 1.0 | J | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 3:26:00 PM | 72239 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical ReportLab Order: **2212A11**Date Reported: **1/12/2023****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Marathon**Client Sample ID:** Dup-12-15-22**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/15/2022**Lab ID:** 2212A11-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 49.8 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Surr: 2-Fluorobiphenyl | 42.3 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 3:26:00 PM | 72239 |
| Surr: 4-Terphenyl-d14 | 71.8 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 3:26:00 PM | 72239 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022

Lab ID: 2212A11-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.10 | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Chromium | 0.0022 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Silver | 0.0019 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Vanadium | 0.028 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 9:00:13 PM | 72221 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 6:02:16 PM | 72221 |
| Arsenic | 0.0019 | 0.0011 | 0.0050 | J | mg/L | 5 | 12/21/2022 6:02:16 PM | 72221 |
| Lead | ND | 0.00097 | 0.0025 | | mg/L | 5 | 12/21/2022 6:02:16 PM | 72221 |
| Selenium | 0.0058 | 0.0044 | 0.0050 | | mg/L | 5 | 12/21/2022 6:02:16 PM | 72221 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:56:58 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-15-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/15/2022

Lab ID: 2212A11-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.056 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Silver | 0.0013 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Vanadium | 0.029 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 3:23:38 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/27/2022 2:24:22 PM | A93556 |
| Arsenic | 0.0023 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 5:54:13 PM | A93438 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 5:54:13 PM | A93438 |
| Selenium | 0.0070 | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 5:54:13 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/23/2022 1:59:06 PM | 72295 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212A11-007A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|-----|-----|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Naphthalene | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1-Methylnaphthalene | ND | 4.0 | 4.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 2-Methylnaphthalene | ND | 4.0 | 4.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Bromobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Bromodichloromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Bromoform | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Carbon Tetrachloride | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Chloroethane | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 2-Chlorotoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 4-Chlorotoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| cis-1,3-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Dibromochloromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Dibromomethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,3-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,4-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Dichlorodifluoromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2-Dichloropropane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,3-Dichloropropane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 2,2-Dichloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212A11-007A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Hexachlorobutadiene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 2-Hexanone | ND | 10 | 10 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 4-Methyl-2-pentanone | ND | 10 | 10 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| tert-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| trans-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| trans-1,3-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,1,2-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Trichlorofluoromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| 1,2,3-Trichloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 12/29/2022 12:52:27 A | R93599 |
| Surr: 1,2-Dichloroethane-d4 | 95.9 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:52:27 A | R93599 |
| Surr: 4-Bromofluorobenzene | 111 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:52:27 A | R93599 |
| Surr: Dibromofluoromethane | 90.6 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:52:27 A | R93599 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:52:27 A | R93599 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212A11

Date Reported: 1/12/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212A11-007B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 12/27/2022 5:57:52 PM | 72313 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



ANALYTICAL REPORT

December 27, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1569546

Samples Received: 12/20/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|-----------------|
| Cp: Cover Page | 1 | ¹ Cp |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | ² Tc |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | ³ Ss |
| 2212A11-001F EB-12-15-22 L1569546-01 | 5 | |
| 2212A11-002F MKTF-30 L1569546-02 | 6 | ⁴ Cn |
| 2212A11-003F STP-1-NM L1569546-03 | 7 | ⁵ Sr |
| 2212A11-004F OPIS-1 L1569546-04 | 8 | |
| 2212A11-005F DUP-12-15-22 L1569546-05 | 9 | ⁶ Qc |
| Qc: Quality Control Summary | 10 | |
| Wet Chemistry by Method 4500CN E-2016 | 10 | ⁷ Gl |
| Gl: Glossary of Terms | 11 | ⁸ Al |
| Al: Accreditations & Locations | 12 | |
| Sc: Sample Chain of Custody | 13 | ⁹ Sc |

2212A11-001F EB-12-15-22 L1569546-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1977924 | 1 | 12/26/22 17:25 | 12/26/22 21:53 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

2212A11-002F MKTF-30 L1569546-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1977924 | 1 | 12/26/22 17:25 | 12/26/22 21:54 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212A11-003F STP-1-NM L1569546-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1977924 | 1 | 12/26/22 17:25 | 12/26/22 21:55 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212A11-004F OPIS-1 L1569546-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1977924 | 1 | 12/26/22 17:25 | 12/26/22 21:58 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212A11-005F DUP-12-15-22 L1569546-05 GW

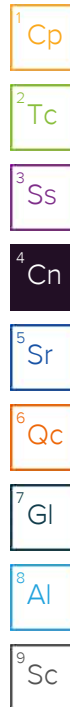
| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1977924 | 1 | 12/26/22 17:25 | 12/26/22 21:59 | CAT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/26/2022 21:53 | WG1977924 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/15/22 10:00

L1569546

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/26/2022 21:54 | WG1977924 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0538 | | 0.00500 | 1 | 12/26/2022 21:55 | WG1977924 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0751 | | 0.00500 | 1 | 12/26/2022 21:58 | WG1977924 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0583 | | 0.00500 | 1 | 12/26/2022 21:59 | WG1977924 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3875503-1 12/26/22 21:33

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1567376-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1567376-02 12/26/22 21:37 • (DUP) R3875503-3 12/26/22 21:38

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1569421-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1569421-02 12/26/22 21:46 • (DUP) R3875503-6 12/26/22 21:47

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 36.9 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3875503-2 12/26/22 21:34

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.105 | 105 | 87.1-120 | |

L1567392-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1567392-02 12/26/22 21:39 • (MS) R3875503-4 12/26/22 21:40 • (MSD) R3875503-5 12/26/22 21:41

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0984 | 0.0999 | 98.4 | 99.9 | 1 | 90.0-110 | | | 1.51 | 20 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

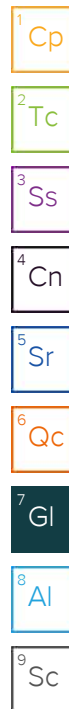
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
|----|---|



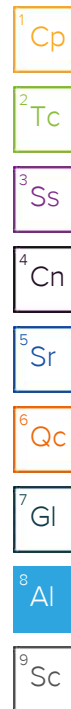
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

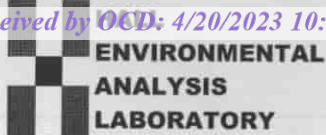
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1,6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1,4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

J146

| | | | | | | | |
|--|--|------------------------|--|-----------------------------|--|---------------------------|--|
| SUB CONTRACTOR Pace TN | | COMPANY PACE TN | | PHONE (800) 767-5859 | | FAX (615) 758-5859 | |
| ADDRESS 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|------------------------|--------------|--|
| 1 | 2212A11-001F | EB-12-15-22 | 500AMBHDP
F-NAOH | Groundw
ater | 12/15/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212A11-002F | MKTF-30 | 500AMBHDP
F-NAOH | Groundw
ater | 12/15/2022 10:00:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212A11-003F | STP-1-NM | 500AMBHDP
F-NAOH | Groundw
ater | 12/15/2022 10:30:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212A11-004F | OPIS-1 | 500AMBHDP
F-NAOH | Groundw
ater | 12/15/2022 11:10:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2212A11-006F | Dup-12-15-22 | 500AMBHDP
F-NAOH | Groundw
ater | 12/15/2022 | 1 | Total Cyanide J and MDL -05 |

L1569546Sample Receipt Checklist

CDC Seal Present/Intact: ☒ Y ☐ N If Applicable
 CDC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☒ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|---|------------------|---------------|---------------------------------|----------------|------------|--|
| Relinquished By: | Date: 12/16/2022 | Time: 8:14 AM | Received By: <i>[Signature]</i> | Date: 12/16/22 | Time: 0930 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples 4.0+0.40 °C Attempt to Cool ?

Comments: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: ☒ Standard ☐ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: MB-72221 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72221 | RunNo: 93476 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371298 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | 0.00082 | 0.0020 | | | | | | | | J |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-72221 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 72221 | RunNo: 93476 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371299 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0030 | 0.002000 | 0 | 106 | 50 | 150 | | | J |
| Beryllium | 0.0026 | 0.0020 | 0.002000 | 0 | 129 | 50 | 150 | | | |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 112 | 50 | 150 | | | |
| Chromium | 0.0060 | 0.0060 | 0.006000 | 0 | 99.5 | 50 | 150 | | | J |
| Cobalt | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Nickel | 0.0074 | 0.010 | 0.005000 | 0 | 148 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.9 | 50 | 150 | | | J |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 112 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 111 | 50 | 150 | | | |

| Sample ID: LCS-72221 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72221 | RunNo: 93476 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371300 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0030 | 0.5000 | 0 | 96.5 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.4 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.4 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.5 | 85 | 115 | | | |
| Silver | 0.096 | 0.0050 | 0.1000 | 0 | 95.7 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375409 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| Sample ID: LCSLL-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|---------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375410 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 89.6 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.9 | 50 | 150 | | | J |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.6 | 50 | 150 | | | J |
| Cobalt | 0.0075 | 0.0060 | 0.006000 | 0 | 125 | 50 | 150 | | | |
| Nickel | 0.0068 | 0.010 | 0.005000 | 0 | 137 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0092 | 0.050 | 0.01000 | 0 | 91.7 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375411 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.47 | 0.0020 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 93.2 | 85 | 115 | | | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0 | 92.1 | 85 | 115 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 89.8 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.1 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 91.0 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375416 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.0030 | 0.0060 | 0.006000 | 0 | 50.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|---------------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-001EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-12-15-22 | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375507 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Cadmium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cobalt | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Nickel | 0.53 | 0.010 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Zinc | 0.54 | 0.010 | 0.5000 | 0 | 108 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-001EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: EB-12-15-22 | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375544 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | 1.72 | 20 | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | 2.70 | 20 | |
| Cadmium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 70 | 130 | 2.33 | 20 | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 70 | 130 | 1.48 | 20 | |
| Cobalt | 0.54 | 0.0060 | 0.5000 | 0 | 108 | 70 | 130 | 1.84 | 20 | |
| Nickel | 0.54 | 0.010 | 0.5000 | 0 | 108 | 70 | 130 | 1.37 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 70 | 130 | 1.16 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 105 | 70 | 130 | 1.02 | 20 | |
| Zinc | 0.55 | 0.010 | 0.5000 | 0 | 110 | 70 | 130 | 1.65 | 20 | |

| | | | | | | | | | | |
|---------------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-30 | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375547 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.36 | 0.0020 | 0.5000 | 0.02912 | 65.3 | 70 | 130 | | | S |
| Beryllium | 0.38 | 0.0020 | 0.5000 | 0 | 75.7 | 70 | 130 | | | |
| Cadmium | 0.35 | 0.0020 | 0.5000 | 0 | 70.1 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-30 | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375547 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.32 | 0.0060 | 0.5000 | 0 | 64.4 | 70 | 130 | | | S |
| Cobalt | 0.32 | 0.0060 | 0.5000 | 0 | 64.0 | 70 | 130 | | | S |
| Nickel | 0.33 | 0.010 | 0.5000 | 0.01325 | 64.0 | 70 | 130 | | | S |
| Silver | 0.060 | 0.0050 | 0.1000 | 0.001967 | 58.1 | 70 | 130 | | | S |
| Vanadium | 0.36 | 0.050 | 0.5000 | 0.003101 | 72.2 | 70 | 130 | | | |
| Zinc | 0.32 | 0.010 | 0.5000 | 0 | 64.9 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------|---------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-30 | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375548 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.34 | 0.0020 | 0.5000 | 0.02912 | 62.2 | 70 | 130 | 4.54 | 20 | S |
| Beryllium | 0.36 | 0.0020 | 0.5000 | 0 | 73.0 | 70 | 130 | 3.72 | 20 | |
| Cadmium | 0.33 | 0.0020 | 0.5000 | 0 | 66.7 | 70 | 130 | 4.90 | 20 | S |
| Chromium | 0.30 | 0.0060 | 0.5000 | 0 | 60.9 | 70 | 130 | 5.63 | 20 | S |
| Cobalt | 0.30 | 0.0060 | 0.5000 | 0 | 60.9 | 70 | 130 | 4.90 | 20 | S |
| Nickel | 0.32 | 0.010 | 0.5000 | 0.01325 | 61.2 | 70 | 130 | 4.39 | 20 | S |
| Silver | 0.059 | 0.0050 | 0.1000 | 0.001967 | 56.5 | 70 | 130 | 2.61 | 20 | S |
| Vanadium | 0.35 | 0.050 | 0.5000 | 0.003101 | 69.4 | 70 | 130 | 3.95 | 20 | S |
| Zinc | 0.31 | 0.010 | 0.5000 | 0 | 61.5 | 70 | 130 | 5.37 | 20 | S |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72221 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72221 | RunNo: 93483 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371600 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-72221 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72221 | RunNo: 93483 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371601 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00073 | 0.0010 | 0.001000 | 0 | 72.9 | 50 | 150 | | | J |
| Arsenic | 0.00098 | 0.0010 | 0.001000 | 0 | 98.2 | 50 | 150 | | | J |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.8 | 50 | 150 | | | J |
| Selenium | 0.00096 | 0.0010 | 0.001000 | 0 | 96.2 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-72221 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72221 | RunNo: 93483 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371602 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.6 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.2 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.5 | 85 | 115 | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-72221 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72221 | RunNo: 93483 | | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371616 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370010 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370011 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 94.8 | 50 | 150 | | | J |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.8 | 50 | 150 | | | J |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370012 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.9 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|------------------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-001EMSLL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-15-22 | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370027 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.2 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2212A11-001EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-15-22 | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370028 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 70 | 130 | 0.732 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 97.9 | 70 | 130 | 1.40 | 20 | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | 0.298 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: MKTF-30 | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370059 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.13 | 0.0050 | 0.1250 | 0 | 100 | 70 | 130 | | | |
| Lead | 0.059 | 0.0025 | 0.06250 | 0 | 94.3 | 70 | 130 | | | |
| Selenium | 0.12 | 0.0050 | 0.1250 | 0 | 97.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93556 | | RunNo: 93556 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375278 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93556 | | RunNo: 93556 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375279 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00091 | 0.0010 | 0.001000 | 0 | 91.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93556 | | RunNo: 93556 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375281 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: MKTF-30 | Batch ID: A93556 | | RunNo: 93556 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375297 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.12 | 0.0050 | 0.1250 | 0 | 92.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212A11-002EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: MKTF-30 | Batch ID: A93556 | | RunNo: 93556 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375298 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.12 | 0.0050 | 0.1250 | 0 | 95.7 | 70 | 130 | 3.25 | 20 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------------|--------|----------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 2212A11-003EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: STP-1-NW | | Batch ID: A93556 | | RunNo: 93556 | | | | | | |
| Prep Date: | | Analysis Date: 12/27/2022 | | SeqNo: 3375302 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.12 | 0.0050 | 0.1250 | 0 | 92.8 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72295 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72295 | RunNo: 93535 |
| Prep Date: 12/23/2022 | Analysis Date: 12/23/2022 | SeqNo: 3374379 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: LCSLL-72295 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72295 | RunNo: 93535 |
| Prep Date: 12/23/2022 | Analysis Date: 12/23/2022 | SeqNo: 3374380 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00022 0.00020 0.0001500 | 0 148 50 150 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72295 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72295 | RunNo: 93535 |
| Prep Date: 12/23/2022 | Analysis Date: 12/23/2022 | SeqNo: 3374381 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0054 0.00020 0.005000 | 0 108 85 115 |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72313 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72313 | RunNo: 93609 |
| Prep Date: 12/27/2022 | Analysis Date: 12/27/2022 | SeqNo: 3379199 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72313 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72313 | RunNo: 93609 |
| Prep Date: 12/27/2022 | Analysis Date: 12/27/2022 | SeqNo: 3379200 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.084 | 0.010 0.1000 0 83.7 70 130 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCSD-72313 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 72313 | RunNo: 93609 |
| Prep Date: 12/27/2022 | Analysis Date: 12/27/2022 | SeqNo: 3379201 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.13 | 0.010 0.1000 0 126 70 130 40.2 20 R |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72313 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72313 | RunNo: 93609 |
| Prep Date: 12/27/2022 | Analysis Date: 12/27/2022 | SeqNo: 3379431 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72199 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375094 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.097 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 102 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72199 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375095 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.19 | 0.064 | 0.1875 | 0 | 102 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.016 | | 0.01875 | | 86.1 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72199 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375096 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 111 | 31.2 | 125 | 8.40 | 20 | B |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.8 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: B93549 | | RunNo: 93549 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375200 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 91.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: B93549 | | RunNo: 93549 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375201 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0 | 102 | 80 | 120 | | | |
| Surr: BFB | 38 | | 20.00 | | 189 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212a11-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-30 | Batch ID: B93549 | | RunNo: 93549 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375207 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0.02000 | 98.1 | 70 | 130 | | | |
| Surr: BFB | 38 | | 20.00 | | 188 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2212a11-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-30 | Batch ID: B93549 | | RunNo: 93549 | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | | SeqNo: 3375208 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0.02000 | 98.4 | 70 | 130 | 0.274 | 20 | |
| Surr: BFB | 37 | | 20.00 | | 187 | 70 | 130 | 0 | 0 | S |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93599 | | RunNo: 93599 | | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | SeqNo: 3377331 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 97.6 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 91.4 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.2 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 113 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.6 | | 10.00 | | 86.3 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| Sample ID: 2212a11-002ams | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|----------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: MKTF-30 | Batch ID: R93599 | | RunNo: 93599 | | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | SeqNo: 3377342 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 1.372 | 102 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0.9510 | 101 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 99.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.6 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93599 | | RunNo: 93599 | | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | SeqNo: 3377351 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93599 | | | RunNo: 93599 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377351 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93599 | | | RunNo: 93599 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377351 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 111 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 109 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72138 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371393 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 78 | | 200.0 | | 38.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 65 | | 200.0 | | 32.3 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 53.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 51.9 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 42.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.9 | 34.4 | 134 | | | |

| Sample ID: lcs-72138 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371394 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-72138 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371394 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 56 | 10 | 100.0 | 0 | 55.7 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 37 | 5.0 | 100.0 | 0 | 37.2 | 15 | 89.8 | | | |
| Phenol | 79 | 20 | 200.0 | 0 | 39.3 | 17 | 61.1 | | | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.2 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 37.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 76.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 63 | | 100.0 | | 63.2 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 56.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 100 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-72138 | SampType: LCSd | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371395 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 71 | 10 | 100.0 | 0 | 71.4 | 21.3 | 104 | 24.7 | 45.3 | |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 46.7 | 15 | 89.8 | 22.6 | 39.6 | |
| Phenol | 93 | 20 | 200.0 | 0 | 46.6 | 17 | 61.1 | 16.9 | 42.5 | |
| Pyrene | 92 | 10 | 100.0 | 0 | 92.0 | 61 | 123 | 7.71 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.8 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 86 | | 200.0 | | 42.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 180 | | 200.0 | | 87.9 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.7 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.4 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 108 | 34.4 | 134 | 0 | 0 | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72239 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 72239 | | RunNo: 93784 | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/6/2023 | | SeqNo: 3385637 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72239 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72239 | | RunNo: 93784 | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/6/2023 | | SeqNo: 3385637 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 81 | | 200.0 | | 40.3 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 63 | | 200.0 | | 31.5 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.3 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 52.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 44.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 80 | | 100.0 | | 80.1 | 34.4 | 134 | | | |

| Sample ID: lcs-72239 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72239 | | RunNo: 93784 | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/6/2023 | | SeqNo: 3385638 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 56 | 10 | 100.0 | 0 | 55.7 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 39 | 5.0 | 100.0 | 0 | 38.9 | 15 | 89.8 | | | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.4 | 17 | 61.1 | | | |
| Pyrene | 79 | 10 | 100.0 | 0 | 79.3 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 48.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 77 | | 200.0 | | 38.3 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 80.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 69 | | 100.0 | | 68.7 | 16.8 | 112 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: Ics-72239 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: LCSW | Batch ID: 72239 | | | RunNo: 93784 | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/6/2023 | | | SeqNo: 3385638 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 61.9 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 101 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: Icsd-72239 | SampType: LCSD | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: LCSS02 | Batch ID: 72239 | | | RunNo: 93784 | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/6/2023 | | | SeqNo: 3385639 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 66 | 10 | 100.0 | 0 | 66.3 | 21.3 | 104 | 17.4 | 45.3 | |
| 1,4-Dichlorobenzene | 45 | 5.0 | 100.0 | 0 | 45.1 | 15 | 89.8 | 14.8 | 39.6 | |
| Phenol | 91 | 20 | 200.0 | 0 | 45.3 | 17 | 61.1 | 16.4 | 42.5 | |
| Pyrene | 94 | 10 | 100.0 | 0 | 93.7 | 61 | 123 | 16.6 | 11.8 | R |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 57.1 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 86 | | 200.0 | | 43.2 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 180 | | 200.0 | | 90.5 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 81 | | 100.0 | | 80.9 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 69 | | 100.0 | | 69.2 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 108 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72138 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
|------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72138 | | RunNo: 93434 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | | SeqNo: 3369941 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 48 | | 100.0 | | 48.5 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 83 | | 200.0 | | 41.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 42.0 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 99.8 | 15 | 166 | | | |

| Sample ID: LCS-72138-LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
|--------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72138 | | RunNo: 93434 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | | SeqNo: 3369942 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.82 | 0.30 | 2.000 | 0 | 41.0 | 15 | 60.5 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 15 | 96 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 32.8 | 119 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 106 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 98.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 123 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 102.0 | | 61.2 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72138-LF | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72138 | | RunNo: 93434 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | | SeqNo: 3369942 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 93 | | 104.0 | | 89.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 102.0 | | 52.8 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 89.7 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72138-LF | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72138 | | RunNo: 93434 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | | SeqNo: 3369943 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 1.0 | 2.000 | 0 | 43.0 | 15 | 60.5 | 4.76 | 29.7 | J |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.3 | 5.88 | 31.7 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 79.6 | 7.19 | 31.4 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.6 | 7.41 | 30.5 | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 15 | 92 | 9.40 | 30.5 | |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 15 | 96 | 10.0 | 25.1 | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 21 | 103 | 7.91 | 26.4 | |
| Anthracene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 21.1 | 106 | 4.35 | 14.4 | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 102 | 32.8 | 119 | 2.99 | 14.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 34.1 | 110 | 3.39 | 19.2 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 106 | 32 | 132 | 0 | 29.3 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.3 | 112 | 0 | 19 | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 98.0 | 34.1 | 119 | 0 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 126 | 24.7 | 152 | 2.41 | 21.3 | |
| Surr: Nitrobenzene-d5 | 68 | | 102.0 | | 66.6 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 100 | | 104.0 | | 95.7 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 58 | | 102.0 | | 56.5 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 88.8 | 15 | 166 | 0 | 0 | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72239 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72239 | | RunNo: 93725 | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/4/2023 | | SeqNo: 3383312 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72239 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|------------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72239 | RunNo: 93725 | | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383312 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 52.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 97 | | 200.0 | | 48.6 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 46 | | 100.0 | | 45.8 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 100.0 | | 90.8 | 15 | 166 | | | |

| Sample ID: lcs-72239 If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72239 | RunNo: 93725 | | | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383313 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 0.30 | 2.000 | 0 | 36.0 | 15 | 60.5 | | | |
| Naphthalene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 61.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.2 | 0.30 | 2.000 | 0 | 59.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 15 | 92 | | | |
| Fluorene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 96 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 21 | 103 | | | |
| Anthracene | 1.6 | 0.30 | 2.000 | 0 | 79.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 32.8 | 119 | | | |
| Pyrene | 1.6 | 1.0 | 2.000 | 0 | 78.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 32 | 132 | | | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 88.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.4 | 0.30 | 2.000 | 0 | 120 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 72 | | 102.0 | | 70.9 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 204.0 | | 51.4 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 63 | | 102.0 | | 62.0 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 89.0 | 15 | 166 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: lcsd-72239 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 72239 | | | RunNo: 93725 | | | | | | |
| Prep Date: 12/21/2022 | Analysis Date: 1/4/2023 | | | SeqNo: 3383314 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.52 | 0.30 | 2.000 | 0 | 26.0 | 15 | 60.5 | 32.3 | 29.7 | R |
| Naphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 78.3 | 16.8 | 31.7 | |
| 1-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 79.6 | 10.3 | 31.4 | |
| 2-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 78.6 | 3.45 | 30.5 | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 92 | 17.9 | 30.5 | |
| Fluorene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 96 | 1.40 | 25.1 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21 | 103 | 11.3 | 26.4 | |
| Anthracene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 21.1 | 106 | 22.5 | 14.4 | R |
| Fluoranthene | 2.3 | 0.30 | 2.000 | 0 | 113 | 32.8 | 119 | 24.9 | 14.8 | R |
| Pyrene | 2.0 | 1.0 | 2.000 | 0 | 100 | 34.1 | 110 | 24.7 | 19.2 | R |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 107 | 32 | 132 | 10.8 | 29.3 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 31.3 | 112 | 2.47 | 19 | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 86.0 | 34.1 | 119 | 2.30 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.6 | 0.30 | 2.000 | 0 | 131 | 24.7 | 152 | 8.76 | 21.3 | |
| Surr: Nitrobenzene-d5 | 58 | | 102.0 | | 56.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 0 | | 204.0 | | 0 | 15 | 112 | 0 | 0 | S |
| Surr: 2-Fluorobiphenyl | 54 | | 102.0 | | 53.2 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 83 | | 102.0 | | 81.8 | 15 | 166 | 0 | 0 | |

| Sample ID: mb-72406 | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | | |
|----------------------------|--------------------------------|-----|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72406 | | | RunNo: 93725 | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3383328 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 45.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 15 | 166 | | | |

| Sample ID: lcs-72406-lf | SampType: LCS | | | TestCode: EPA Method 8270SIM | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | | | RunNo: 93725 | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3383329 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 67 | | 102.0 | | 65.7 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 55.4 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 102.0 | | 56.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 102.0 | | 100 | 15 | 166 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212A11

12-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: lcscd-72406-lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|----------------------------------|--------------------------------|-----|-----------|-------------------------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 72406 | | | RunNo: 93725 | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3383330 | | | Units: %Rec | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 76 | | 102.0 | | 74.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 204.0 | | 57.9 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 102.0 | | 64.1 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 102.0 | | 95.1 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212A11**

ReptNo: **1**

Received By: **Tracy Casarrubias** 12/16/2022 7:40:00 AM

Completed By: **Tracy Casarrubias** 12/16/2022 8:00:31 AM

Reviewed By: *JS 12-16-22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐ *See vial label*
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

10
(2 or 12 unless noted)

Adjusted? *1/2*

Checked by: *See vial label*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: *added ~0.5ml VADs to each for metals analysis, checked for proper pH*

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.6 | Good | Yes | | | |
| 2 | 3.1 | Good | Yes | | | |
| 3 | 0.4 | Good | Yes | | | |

Client: Marathon Gallup Refinery



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.natureironmenial.com

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

| Received by: <u>DCT</u> 4/20/2023 10:38:19 AM | | | | | | |
|---|-------|--------------------------------|--------------|----------------------|-------------------|----------|
| Client: Marathon Gallup Refinery | | | | | | |
| X Standard Rush | | | | | | |
| Project Name: | | | | | | |
| 2022 GW Sampling 4th Quarter | | | | | | |
| Project #: 697-080-001 | | | | | | |
| Project Manager:
Lesli Alexander | | | | | | |
| Sampler: | | | | | | |
| On Ice: ☒ Yes ☐ No | | | | | | |
| # of Coolers: <u>3</u> | | | | | | |
| Cooler Temp (including CF): See Checklist | | | | | | |
| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
| 12/15 | 9:30 | | EB-12-15-22 | 13 | | 2212A11 |
| 12/15 | 16:00 | | MKTP-30 | 13 | | 001 |
| 12/15 | 16:30 | | STP-1-NW | 13 | | 002 |
| 12/15 | 11:16 | | OPIS-1 | 13 | | 003 |
| 12/15 | 11:10 | | FIB-12-15-22 | 3 | | 004 |
| 12/15 | - | | DUP-12-15-22 | 13 | | 003 |
| | | | | | | 004 |
| | | | | | | |
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| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Date | Time | Relinquished by: Hilario T-gio | | Received by: | Via: <u>Cover</u> | Date |
| 12/15 | 1:00 | <u>[Signature]</u> | | <u>[Signature]</u> | | 12/16/22 |
| Date | Time | Relinquished by: | | Received by: | Via: | Date |
| | | | | | | |

If necessary, samples submitted to Watt Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analysis report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 17, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212D48

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/23/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212D48
Date: 1/17/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B". The laboratory control spike (LCS) had an elevated recovery.

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for samples OW-1

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample BW-5C

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 9:38:31 PM | R93580 |
| Surr: BFB | 93.9 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 9:38:31 PM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 96.5 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Surr: Dibromofluoromethane | 99.2 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:15:14 PM | R93684 |
| Surr: Toluene-d8 | 98.9 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:15:14 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 1:41:54 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.019 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 11:14:04 AM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 11:14:04 AM | 72336 |
| Surr: DNOP | 97.2 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 11:14:04 AM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: 2-Fluorophenol | 43.4 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: Phenol-d5 | 32.8 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 57.6 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: Nitrobenzene-d5 | 61.1 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 88.1 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 2:59:49 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 4:27:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 58.5 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 52.1 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 4:27:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 95.1 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 4:27:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 11:31:00 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 12:40:52 PM | 72387 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 1/3/2023 12:40:52 PM | 72387 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 12:40:52 PM | 72387 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/3/2023 12:40:52 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 7:41:19 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:30:00 AM

Lab ID: 2212D48-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 4:02:59 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 12:42:35 PM | A93915 |
| Arsenic | ND | 0.00057 | 0.0010 | | mg/L | 1 | 1/12/2023 12:42:35 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 12:42:35 PM | A93915 |
| Selenium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 12:42:35 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 7:47:47 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 10:01:59 PM | R93580 |
| Surr: BFB | 96.0 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 10:01:59 PM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 119 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:42:20 PM | R93684 |
| Surr: Toluene-d8 | 92.6 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 4:42:20 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 2:11:23 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.028 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 11:37:45 AM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 11:37:45 AM | 72336 |
| Surr: DNOP | 98.7 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 11:37:45 AM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 1-Methylnaphthalene | ND | 4.3 | 5.0 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 2-Methylnaphthalene | ND | 4.2 | 5.0 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Naphthalene | ND | 3.2 | 5.0 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: 2-Fluorophenol | 43.0 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: Phenol-d5 | 32.7 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 60.5 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: Nitrobenzene-d5 | 56.0 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 48.9 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 78.7 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 3:41:31 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 5:11:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 53.3 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 47.2 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 5:11:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 86.0 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 5:11:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.034 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Vanadium | 0.049 | 0.0035 | 0.050 | J | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 11:34:18 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:40:37 PM | 72387 |
| Arsenic | 0.00088 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/3/2023 1:40:37 PM | 72387 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:40:37 PM | 72387 |
| Selenium | 0.0015 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 2:55:45 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 7:49:58 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-1

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 8:55:00 AM

Lab ID: 2212D48-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.035 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Vanadium | 0.044 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 4:28:53 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 12:47:50 PM | A93915 |
| Arsenic | 0.00078 | 0.00057 | 0.0010 | J | mg/L | 1 | 1/12/2023 12:47:50 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 12:47:50 PM | A93915 |
| Selenium | 0.0047 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 12:47:50 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 7:52:05 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 11:12:35 PM | R93580 |
| Surr: BFB | 94.8 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 11:12:35 PM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 96.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 96.3 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Surr: Dibromofluoromethane | 94.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:09:26 PM | R93684 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:09:26 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 2:26:04 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.063 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 12:01:29 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 12:01:29 PM | 72336 |
| Surr: DNOP | 96.3 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 12:01:29 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: 2-Fluorophenol | 43.8 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: Phenol-d5 | 33.1 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 70.4 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: Nitrobenzene-d5 | 61.4 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 54.7 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 77.9 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 4:22:27 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 5:55:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.1 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 59.2 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 5:55:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 95.1 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 5:55:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.057 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Chromium | 0.0053 | 0.0020 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Cobalt | 0.0037 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Vanadium | 0.037 | 0.0035 | 0.050 | J | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| Zinc | 0.0065 | 0.0039 | 0.010 | J | mg/L | 1 | 1/3/2023 11:37:36 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:43:03 PM | 72387 |
| Arsenic | 0.0073 | 0.00022 | 0.0010 | | mg/L | 1 | 1/3/2023 1:43:03 PM | 72387 |
| Lead | 0.00075 | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:43:03 PM | 72387 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/3/2023 1:43:03 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 7:54:13 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-4B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 9:25:00 AM

Lab ID: 2212D48-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.038 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Vanadium | 0.016 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 4:34:31 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 12:53:06 PM | A93915 |
| Arsenic | 0.0067 | 0.00057 | 0.0010 | | mg/L | 1 | 1/12/2023 12:53:06 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 12:53:06 PM | A93915 |
| Selenium | 0.0016 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 12:53:06 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:00:36 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.020 | 0.0090 | 0.050 | J | mg/L | 1 | 12/28/2022 11:36:02 PM | R93580 |
| Surr: BFB | 97.1 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 11:36:02 PM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | 19 | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 94.5 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:36:33 PM | R93684 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 5:36:33 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 12/30/2022 2:40:46 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.081 | 0.016 | 0.064 | BE | mg/L | 1 | 12/30/2022 12:25:01 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 12:25:01 PM | 72336 |
| Surr: DNOP | 108 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 12:25:01 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 1-Methylnaphthalene | ND | 4.3 | 5.0 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: Phenol-d5 | 34.8 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 66.8 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: Nitrobenzene-d5 | 60.9 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 55.1 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 87.1 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 5:03:35 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.9 | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 6:38:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.7 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 6:38:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 97.6 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 6:38:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.16 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Chromium | 0.0046 | 0.0020 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Cobalt | 0.0059 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Vanadium | 0.0099 | 0.0035 | 0.050 | J | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 11:46:04 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:45:30 PM | 72387 |
| Arsenic | ND | 0.0011 | 0.0050 | | mg/L | 5 | 1/5/2023 2:58:12 PM | 72387 |
| Lead | 0.0013 | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:45:30 PM | 72387 |
| Selenium | ND | 0.0044 | 0.0050 | | mg/L | 5 | 1/5/2023 2:58:12 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00027 | 0.000091 | 0.00020 | | mg/L | 1 | 1/6/2023 8:02:44 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5C

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:00:00 AM

Lab ID: 2212D48-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.072 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Silver | 0.0013 | 0.0013 | 0.0050 | J | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| Zinc | 0.0088 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 4:40:06 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 12:58:19 PM | A93915 |
| Arsenic | 0.0013 | 0.00057 | 0.0010 | | mg/L | 1 | 1/12/2023 12:58:19 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 12:58:19 PM | A93915 |
| Selenium | 0.010 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 12:58:19 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:04:52 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 11:59:28 PM | R93580 |
| Surr: BFB | 94.9 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 11:59:28 PM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | 2.9 | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 94.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:03:36 PM | R93684 |
| Surr: Toluene-d8 | 96.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:03:36 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/30/2022 2:55:30 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.039 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 12:48:34 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 12:48:34 PM | 72336 |
| Surr: DNOP | 101 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 12:48:34 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: 2-Fluorophenol | 52.3 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: Phenol-d5 | 38.5 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 72.3 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: Nitrobenzene-d5 | 67.5 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 55.2 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 89.1 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 5:44:24 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.64 | 0.11 | 1.0 | J | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 7:21:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.2 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 52.0 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 7:21:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 91.0 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 7:21:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.26 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Cobalt | 0.0057 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Vanadium | 0.013 | 0.0035 | 0.050 | J | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 11:49:11 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:47:57 PM | 72387 |
| Arsenic | 0.0013 | 0.00022 | 0.0010 | | mg/L | 1 | 1/3/2023 1:47:57 PM | 72387 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:47:57 PM | 72387 |
| Selenium | 0.0015 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:00:38 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:07:00 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: BW-5B

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 10:30:00 AM

Lab ID: 2212D48-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.26 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Vanadium | 0.012 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 4:56:09 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 1:03:33 PM | A93915 |
| Arsenic | 0.0017 | 0.00057 | 0.0010 | | mg/L | 1 | 1/12/2023 1:03:33 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 1:03:33 PM | A93915 |
| Selenium | 0.0064 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 1:03:33 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:09:08 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/29/2022 12:23:01 AM | R93580 |
| Surr: BFB | 92.9 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:23:01 AM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 90.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 95.6 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Surr: Dibromofluoromethane | 92.8 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:30:39 PM | R93684 |
| Surr: Toluene-d8 | 99.7 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:30:39 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 3:10:13 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.024 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 1:12:04 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 1:12:04 PM | 72336 |
| Surr: DNOP | 91.3 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 1:12:04 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: 2-Fluorophenol | 46.8 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: Phenol-d5 | 35.1 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 64.3 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: Nitrobenzene-d5 | 61.5 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 92.1 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 6:25:59 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 8:05:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.8 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 55.5 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 8:05:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 112 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 8:05:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.083 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Chromium | 0.0038 | 0.0020 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Cobalt | 0.0054 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Vanadium | 0.15 | 0.0035 | 0.050 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 11:52:30 AM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:50:23 PM | 72387 |
| Arsenic | 0.013 | 0.00022 | 0.0010 | * | mg/L | 1 | 1/3/2023 1:50:23 PM | 72387 |
| Lead | 0.0040 | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:50:23 PM | 72387 |
| Selenium | 0.014 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:03:04 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:11:17 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-44

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:00:00 AM

Lab ID: 2212D48-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.022 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Vanadium | 0.11 | 0.0017 | 0.050 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 5:01:51 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 1:08:45 PM | A93915 |
| Arsenic | 0.012 | 0.00057 | 0.0010 | * | mg/L | 1 | 1/12/2023 1:08:45 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 1:08:45 PM | A93915 |
| Selenium | 0.015 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 1:08:45 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:13:27 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/29/2022 12:46:29 AM | R93580 |
| Surr: BFB | 95.8 | 0 | 70-130 | | %Rec | 1 | 12/29/2022 12:46:29 AM | R93580 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | 4.3 | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Surr: Dibromofluoromethane | 98.2 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:57:43 PM | R93684 |
| Surr: Toluene-d8 | 98.6 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 6:57:43 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 3:24:57 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.069 | 0.016 | 0.064 | BE | mg/L | 1 | 12/30/2022 1:35:27 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 1:35:27 PM | 72336 |
| Surr: DNOP | 104 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 1:35:27 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: 2-Fluorophenol | 40.5 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: Phenol-d5 | 34.8 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 23.4 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: Nitrobenzene-d5 | 61.9 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 52.8 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 75.9 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 7:06:32 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.2 | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 8:48:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 55.6 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 49.1 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 8:48:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 82.5 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 8:48:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.049 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Cobalt | 0.0062 | 0.0035 | 0.0060 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Vanadium | 0.0073 | 0.0035 | 0.050 | J | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 12:14:56 PM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 1:52:50 PM | 72387 |
| Arsenic | 0.00061 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/3/2023 1:52:50 PM | 72387 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 1:52:50 PM | 72387 |
| Selenium | 0.0076 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:05:31 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:15:36 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-10

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 11:30:00 AM

Lab ID: 2212D48-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.046 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Vanadium | 0.0064 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| Zinc | 0.0069 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 5:07:41 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0023 | 0.0050 | | mg/L | 5 | 1/10/2023 12:48:58 PM | A93855 |
| Arsenic | ND | 0.0029 | 0.0050 | | mg/L | 5 | 1/10/2023 12:48:58 PM | A93855 |
| Lead | ND | 0.00049 | 0.0025 | | mg/L | 5 | 1/10/2023 12:48:58 PM | A93855 |
| Selenium | 0.015 | 0.0028 | 0.0050 | | mg/L | 5 | 1/10/2023 12:48:58 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:17:46 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 5:15:00 PM | R93606 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:15:00 PM | R93606 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 91.9 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Surr: Dibromofluoromethane | 94.1 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:24:45 PM | R93684 |
| Surr: Toluene-d8 | 89.0 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:24:45 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 12/30/2022 3:39:43 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.13 | 0.016 | 0.064 | BE | mg/L | 1 | 12/30/2022 1:58:52 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 1:58:52 PM | 72336 |
| Surr: DNOP | 104 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 1:58:52 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: 2-Fluorophenol | 1.10 | 0 | 15-84.5 | S | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: Phenol-d5 | 4.92 | 0 | 15-67 | S | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 1.52 | 0 | 15-108 | S | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: Nitrobenzene-d5 | 60.2 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 51.9 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 84.6 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 7:47:52 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 10:26:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.1 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 50.9 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 10:26:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 93.4 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 10:26:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.083 | 0.0079 | 0.015 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Beryllium | ND | 0.0030 | 0.010 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Cadmium | ND | 0.0088 | 0.010 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Cobalt | 0.095 | 0.018 | 0.030 | | mg/L | 5 | 1/9/2023 9:23:01 AM | 72387 |
| Nickel | ND | 0.027 | 0.050 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Silver | ND | 0.0092 | 0.025 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Vanadium | ND | 0.018 | 0.25 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| Zinc | ND | 0.019 | 0.050 | | mg/L | 5 | 1/3/2023 12:18:06 PM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0089 | 0.020 | | mg/L | 20 | 1/5/2023 3:07:58 PM | 72387 |
| Arsenic | ND | 0.0044 | 0.020 | | mg/L | 20 | 1/5/2023 3:07:58 PM | 72387 |
| Lead | ND | 0.0039 | 0.010 | | mg/L | 20 | 1/5/2023 3:07:58 PM | 72387 |
| Selenium | ND | 0.018 | 0.020 | | mg/L | 20 | 1/5/2023 3:07:58 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000097 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:19:56 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-43

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.042 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Beryllium | 0.00085 | 0.00059 | 0.0020 | J | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Nickel | 0.0056 | 0.0033 | 0.010 | J | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Silver | 0.025 | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Vanadium | 0.0058 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 5:13:54 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0045 | 0.010 | | mg/L | 10 | 1/11/2023 1:04:56 PM | A93877 |
| Arsenic | ND | 0.0057 | 0.010 | | mg/L | 10 | 1/11/2023 1:04:56 PM | A93877 |
| Lead | ND | 0.00099 | 0.0050 | | mg/L | 10 | 1/11/2023 1:04:56 PM | A93877 |
| Selenium | 0.088 | 0.0056 | 0.010 | * | mg/L | 10 | 1/11/2023 1:04:56 PM | A93877 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000093 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:29:59 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022 12:00:00 PM

Lab ID: 2212D48-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 101 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 96.3 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:51:46 PM | R93684 |
| Surr: Toluene-d8 | 87.4 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 7:51:46 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/28/2022 5:34:00 PM | R93606 |
| Surr: BFB | 106 | 0 | 70-130 | | %Rec | 1 | 12/28/2022 5:34:00 PM | R93606 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:18:49 PM | R93684 |
| Surr: Toluene-d8 | 99.1 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:18:49 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/30/2022 3:54:32 AM | 72358 |

NOTES:

No trip blank was included with work order

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.029 | 0.016 | 0.064 | BJE | mg/L | 1 | 12/30/2022 2:22:16 PM | 72336 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | E | mg/L | 1 | 12/30/2022 2:22:16 PM | 72336 |
| Surr: DNOP | 108 | 0 | 15.9-177 | E | %Rec | 1 | 12/30/2022 2:22:16 PM | 72336 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: 2-Fluorophenol | 51.4 | 0 | 15-84.5 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: Phenol-d5 | 38.9 | 0 | 15-67 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: 2,4,6-Tribromophenol | 67.4 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 16.8-112 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 58.9 | 0 | 15-101 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 89.3 | 0 | 34.4-134 | | %Rec | 1 | 1/4/2023 8:28:20 PM | 72320 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/3/2023 11:09:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.1 | 0 | 15-108 | | %Rec | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Surr: 2-Fluorobiphenyl | 49.9 | 0 | 15-107 | | %Rec | 1 | 1/3/2023 11:09:00 PM | 72320 |
| Surr: 4-Terphenyl-d14 | 89.5 | 0 | 15-166 | | %Rec | 1 | 1/3/2023 11:09:00 PM | 72320 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.037 | 0.0016 | 0.0030 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Vanadium | 0.052 | 0.0035 | 0.050 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/3/2023 12:19:50 PM | 72387 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/3/2023 2:09:57 PM | 72387 |
| Arsenic | 0.00092 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/3/2023 2:09:57 PM | 72387 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/3/2023 2:09:57 PM | 72387 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:10:24 PM | 72387 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:32:07 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-22-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/22/2022

Lab ID: 2212D48-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.034 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Vanadium | 0.043 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 5:21:16 PM | A93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/12/2023 1:13:59 PM | A93915 |
| Arsenic | 0.00075 | 0.00057 | 0.0010 | J | mg/L | 1 | 1/12/2023 1:13:59 PM | A93915 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/12/2023 1:13:59 PM | A93915 |
| Selenium | 0.0044 | 0.00056 | 0.0010 | | mg/L | 1 | 1/12/2023 1:13:59 PM | A93915 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:34:15 AM | 72445 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212D48-011A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|-----|-----|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Naphthalene | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1-Methylnaphthalene | ND | 4.0 | 4.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 2-Methylnaphthalene | ND | 4.0 | 4.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Bromobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Bromodichloromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Bromoform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Carbon Tetrachloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Chloroethane | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 2-Chlorotoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 4-Chlorotoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| cis-1,3-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Dibromochloromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Dibromomethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,3-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,4-Dichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Dichlorodifluoromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2-Dichloropropane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,3-Dichloropropane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 2,2-Dichloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212D48

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212D48-011A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Hexachlorobutadiene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 2-Hexanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 4-Methyl-2-pentanone | ND | 10 | 10 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| tert-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| trans-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| trans-1,3-Dichloropropene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,1,2-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Trichlorofluoromethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| 1,2,3-Trichloropropane | ND | 2.0 | 2.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Surr: 1,2-Dichloroethane-d4 | 121 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:45:52 PM | R93684 |
| Surr: Toluene-d8 | 89.4 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:45:52 PM | R93684 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



ANALYTICAL REPORT

January 03, 2023

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1571184

Samples Received: 12/28/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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2212D48-001F EB-12-22-22 L1571184-01 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 08:30 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980609 | 1 | 12/29/22 17:31 | 12/29/22 22:33 | LDT | Mt. Juliet, TN |

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

2212D48-002F OW-1 L1571184-02 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 08:55 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980609 | 1 | 12/29/22 17:31 | 12/29/22 22:34 | LDT | Mt. Juliet, TN |

2212D48-003F BW-4B L1571184-03 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 09:25 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980609 | 1 | 12/29/22 17:31 | 12/29/22 22:37 | LDT | Mt. Juliet, TN |

2212D48-004F BW-5C L1571184-04 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 10:00 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980609 | 1 | 12/29/22 17:31 | 12/29/22 22:39 | LDT | Mt. Juliet, TN |

2212D48-005F BW-5B L1571184-05 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 10:30 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 17:49 | LDT | Mt. Juliet, TN |

2212D48-006F MKTF-44 L1571184-06 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 11:00 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 17:50 | LDT | Mt. Juliet, TN |

2212D48-007F OW-10 L1571184-07 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 11:30 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 17:52 | LDT | Mt. Juliet, TN |

2212D48-008F MKTF-43 L1571184-08 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/22/22 12:00 | 12/28/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 17:54 | LDT | Mt. Juliet, TN |

SAMPLE SUMMARY

2212D48-009F DUP-12-22-22 L1571184-09 WW

Collected by
Collected date/time
Received date/time

12/22/22 00:00 12/28/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 17:59 | LDT | Mt. Juliet, TN |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

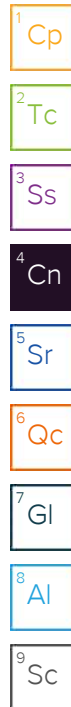
⁸Al

⁹Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/29/2022 22:33 | WG1980609 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/29/2022 22:34 | WG1980609 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/29/2022 22:37 | WG1980609 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/29/2022 22:39 | WG1980609 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 17:49 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/22/22 11:00

L1571184

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 17:50 | WG1980984 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 17:52 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/22/22 12:00

L1571184

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 17:54 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J6 | 0.00500 | 1 | 12/30/2022 17:59 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1571184-01,02,03,04

Method Blank (MB)

(MB) R3876667-1 12/29/22 22:13

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1571158-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1571158-01 12/29/22 22:17 • (DUP) R3876667-3 12/29/22 22:18

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1571182-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1571182-01 12/29/22 22:46 • (DUP) R3876667-6 12/29/22 22:47

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.419 | 0.338 | 5 | 21.5 | J3 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3876667-2 12/29/22 22:14

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0979 | 97.9 | 87.1-120 | |

L1571158-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571158-02 12/29/22 22:19 • (MS) R3876667-4 12/29/22 22:20 • (MSD) R3876667-5 12/29/22 22:21

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0974 | 0.0967 | 97.4 | 96.7 | 1 | 90.0-110 | | | 0.721 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

L1571184-05,06,07,08,09

Method Blank (MB)

(MB) R3877001-1 12/30/22 17:35

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1571184-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1571184-06 12/30/22 17:50 • (DUP) R3877001-3 12/30/22 17:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1571184-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1571184-07 12/30/22 17:52 • (DUP) R3877001-4 12/30/22 17:53

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3877001-2 12/30/22 17:36

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0882 | 88.2 | 87.1-120 | |

L1571184-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-08 12/30/22 17:54 • (MS) R3877001-5 12/30/22 17:55 • (MSD) R3877001-6 12/30/22 17:56

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0910 | 0.0913 | 91.0 | 91.3 | 1 | 90.0-110 | | | 0.329 | 20 |

L1571184-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-09 12/30/22 17:59 • (MS) R3877001-7 12/30/22 18:00 • (MSD) R3877001-8 12/30/22 18:01

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0893 | 0.0914 | 89.3 | 91.4 | 1 | 90.0-110 | J6 | | 2.32 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1571184-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-09 12/30/22 17:59 • (MS) R3877001-7 12/30/22 18:00 • (MSD) R3877001-8 12/30/22 18:01

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-----|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |

Sample Narrative:
MS: Matrix spike failure due to matrix.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

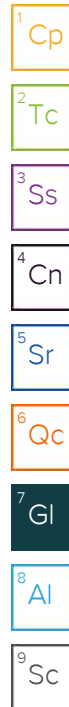
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J3 | The associated batch QC was outside the established quality control range for precision. |
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |



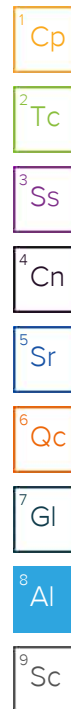
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

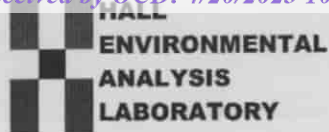
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

H059

| | | | | | | | |
|---|--------------|-------------------------|---------------------|------------------------------|------------------------|----------------------------|-----------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2212D48-001F | EB-12-22-22 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 8:30:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212D48-002F | OW-1 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 8:55:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212D48-003F | BW-4B | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 9:25:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212D48-004F | BW-5C | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 10:00:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2212D48-005F | BW-5B | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 10:30:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2212D48-006F | MKTF-44 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 11:00:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2212D48-007F | OW-10 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 11:30:00 AM | 1 | Total Cyanide J and MDL -07 |
| 8 | 2212D48-008F | MKTF-43 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 12:00:00 PM | 1 | Total Cyanide J and MDL -08 |
| 9 | 2212D48-010F | DUP-12-22-22 | 500AMBHDP
F.NAOH | Groundw
water | 12/22/2022 | 1 | Total Cyanide J and MDL -09 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | |
|-----------------------------|-------------------------|----------------------|---------------------------------|-------------------------|-------------------|
| Relinquished By: I-O | Date: 12/23/2022 | Time: 9:41 AM | Received By: <i>[Signature]</i> | Date: 12/23/2022 | Time: 0900 |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples **0.4** °C Attempt to Cool ? ☐

Comments: _____

TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72387 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72387 | RunNo: 93679 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/3/2023 | SeqNo: 3381193 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0051 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72387 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72387 | RunNo: 93679 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/3/2023 | SeqNo: 3381194 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 97.3 | 50 | 150 | | | J |
| Beryllium | 0.0017 | 0.0020 | 0.002000 | 0 | 83.2 | 50 | 150 | | | J |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.3 | 50 | 150 | | | J |
| Chromium | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Cobalt | 0.012 | 0.0060 | 0.006000 | 0 | 195 | 50 | 150 | | | S |
| Nickel | 0.0044 | 0.010 | 0.005000 | 0 | 87.3 | 50 | 150 | | | J |
| Silver | 0.0050 | 0.0050 | 0.005000 | 0 | 100 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 110 | 50 | 150 | | | J |
| Zinc | 0.0097 | 0.010 | 0.01000 | 0 | 97.0 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72387 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72387 | RunNo: 93679 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/3/2023 | SeqNo: 3381195 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0030 | 0.5000 | 0 | 97.2 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 94.9 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 91.8 | 85 | 115 | | | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.4 | 85 | 115 | | | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0 | 96.6 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|--------------------------------|--|
| Sample ID: MB-72387 | SampType: MBLK | TestCode: EPA Method 200.7: Metals |
| Client ID: PBW | Batch ID: 72387 | RunNo: 93794 |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3386105 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cobalt | ND | 0.0060 |

| | | |
|-------------------------------|--------------------------------|--|
| Sample ID: LCSLL-72387 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals |
| Client ID: BatchQC | Batch ID: 72387 | RunNo: 93794 |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3386106 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cobalt | 0.0072 | 0.0060 0.006000 0 119 50 150 |

| | | |
|------------------------------|--------------------------------|--|
| Sample ID: LCS-72387 | SampType: LCS | TestCode: EPA Method 200.7: Metals |
| Client ID: LCSW | Batch ID: 72387 | RunNo: 93794 |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3386107 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cobalt | 0.52 | 0.0060 0.5000 0 104 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3384996 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3384997 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.3 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.6 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 109 | 50 | 150 | | | |
| Chromium | 0.0054 | 0.0060 | 0.006000 | 0 | 90.1 | 50 | 150 | | | J |
| Cobalt | 0.0063 | 0.0060 | 0.006000 | 0 | 105 | 50 | 150 | | | |
| Nickel | 0.0044 | 0.010 | 0.005000 | 0 | 88.3 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.3 | 50 | 150 | | | J |
| Vanadium | 0.0097 | 0.050 | 0.01000 | 0 | 96.6 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 110 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3384998 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0020 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0 | 97.6 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.4 | 85 | 115 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 94.1 | 85 | 115 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 90.7 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.1 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.3 | 85 | 115 | | | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0 | 93.2 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|--------|-------------------------|-----------|-----------------------------|------|----------|-------------|------|----------|------|
| Sample ID: MB-72387 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 72387 | | RunNo: 93685 | | | | | | |
| Prep Date: 12/30/2022 | | Analysis Date: 1/3/2023 | | SeqNo: 3381701 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|--------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-72387 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 72387 | | RunNo: 93685 | | | | | | |
| Prep Date: 12/30/2022 | | Analysis Date: 1/3/2023 | | SeqNo: 3381702 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00095 | 0.0010 | 0.001000 | 0 | 94.7 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 109 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 101 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|------------------------------------|------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-72387 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 72387 | | RunNo: 93685 | | | | | | |
| Prep Date: 12/30/2022 | | Analysis Date: 1/3/2023 | | SeqNo: 3381703 | | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387949 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387950 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.3 | 50 | 150 | | | J |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.8 | 50 | 150 | | | J |

| Sample ID: LCSD | SampType: LCSD | | TestCode: EPA 200.8: Metals | | | | | | | |
|--------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: A93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387952 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | 2.62 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | 1.89 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 85 | 115 | 3.90 | 20 | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | 1.01 | 20 | |

| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A93877 | | RunNo: 93877 | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | | SeqNo: 3388811 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
|---------------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A93877 | | RunNo: 93877 | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | | SeqNo: 3388813 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------|--------------------------|-----------------------------|-------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93877 | RunNo: 93877 | | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | SeqNo: 3388813 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00092 | 0.0010 | 0.001000 | 0 | 92.3 | 50 | 150 | | | J |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 123 | 50 | 150 | | | |
| Lead | 0.00052 | 0.00050 | 0.0005000 | 0 | 105 | 50 | 150 | | | |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 100 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------------------------|-----------------------------|-------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93877 | RunNo: 93877 | | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | SeqNo: 3388814 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------|--------------------------|-----------------------------|-------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93915 | RunNo: 93915 | | | | | | | | |
| Prep Date: | Analysis Date: 1/12/2023 | SeqNo: 3390476 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--------------------------|-----------------------------|-------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93915 | RunNo: 93915 | | | | | | | | |
| Prep Date: | Analysis Date: 1/12/2023 | SeqNo: 3390477 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00098 | 0.0010 | 0.001000 | 0 | 98.3 | 50 | 150 | | | J |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.8 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------|--------------------------|-----------------------------|-------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93915 | RunNo: 93915 | | | | | | | | |
| Prep Date: | Analysis Date: 1/12/2023 | SeqNo: 3390478 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: LCS | SampType: LCS | | | TestCode: EPA 200.8: Metals | | | | | | |
|------------------------|---------------------------------|---------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: A93915 | | | RunNo: 93915 | | | | | | |
| Prep Date: | Analysis Date: 1/12/2023 | | | SeqNo: 3390478 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.8 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.3 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.5 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 98.6 | 85 | 115 | | | |

| Sample ID: LCSD | SampType: LCSD | | | TestCode: EPA 200.8: Metals | | | | | | |
|--------------------------|---------------------------------|---------|-----------|------------------------------------|------|--------------------|-----------|--------|----------|------|
| Client ID: LCSS02 | Batch ID: A93915 | | | RunNo: 93915 | | | | | | |
| Prep Date: | Analysis Date: 1/12/2023 | | | SeqNo: 3390479 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 90.9 | 85 | 115 | 0.169 | 20 | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.3 | 85 | 115 | 0.0649 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 100 | 85 | 115 | 0.581 | 20 | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.0 | 85 | 115 | 0.356 | 20 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72445 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: PBW | Batch ID: 72445 | RunNo: 93761 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | SeqNo: 3384452 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72445 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72445 | RunNo: 93761 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | SeqNo: 3384453 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00019 | 0.00020 | 0.0001500 | 0 | 124 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72445 | SampType: LCS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: LCSW | Batch ID: 72445 | RunNo: 93761 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | SeqNo: 3384454 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212D48-001DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: EB-12-22-22 | Batch ID: 72445 | RunNo: 93761 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | SeqNo: 3384468 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0055 | 0.00020 | 0.005000 | 0.0001395 | 107 | 75 | 125 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212D48-001DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury | | | | | | | | |
| Client ID: EB-12-22-22 | Batch ID: 72445 | RunNo: 93761 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | SeqNo: 3384469 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0056 | 0.00020 | 0.005000 | 0.0001395 | 108 | 75 | 125 | 1.01 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72358 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379045 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72358 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379050 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: LCS-72358 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379931 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 106 70 130 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|--------|---------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: MB-72336 | | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: PBW | | Batch ID: 72336 | | RunNo: 93659 | | | | | | |
| Prep Date: 12/28/2022 | | Analysis Date: 12/30/2022 | | SeqNo: 3380133 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|--------------------------------|-------|-------|---------|--|------|------|-----|--|--|--|
| Diesel Range Organics (DRO) | 0.079 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 87.3 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|-----------------------|--------|---------------------------|-----------|--|------|-------------|-----------|------|----------|------|
| Sample ID: LCS-72336 | | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSW | | Batch ID: 72336 | | RunNo: 93659 | | | | | | |
| Prep Date: 12/28/2022 | | Analysis Date: 12/30/2022 | | SeqNo: 3380134 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------------------------|-------|-------|---------|---|-----|------|-----|--|--|----|
| Diesel Range Organics (DRO) | 0.26 | 0.064 | 0.1875 | 0 | 137 | 31.2 | 125 | | | BS |
| Surr: DNOP | 0.019 | | 0.01875 | | 103 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------|----------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-72336 | | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | | Batch ID: 72336 | | RunNo: 93659 | | | | | | |
| Prep Date: 12/28/2022 | | Analysis Date: 12/30/2022 | | SeqNo: 3380135 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

| | | | | | | | | | | |
|-----------------------------|-------|-------|---------|---|-----|------|-----|------|----|----|
| Diesel Range Organics (DRO) | 0.25 | 0.064 | 0.1875 | 0 | 134 | 31.2 | 125 | 1.67 | 20 | BS |
| Surr: DNOP | 0.019 | | 0.01875 | | 100 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93580 | | | RunNo: 93580 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377261 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 19 | | 20.00 | | 97.0 | 70 | 130 | | | |

| Sample ID: 2.5ug gro lcs | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|---------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93580 | | | RunNo: 93580 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377262 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0 | 101 | 80 | 120 | | | |
| Surr: BFB | 39 | | 20.00 | | 195 | 70 | 130 | | | S |

| Sample ID: 2212d48-002ams | SampType: MS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|----------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: OW-1 | Batch ID: R93580 | | | RunNo: 93580 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377270 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.48 | 0.050 | 0.5000 | 0 | 95.6 | 70 | 130 | | | |
| Surr: BFB | 39 | | 20.00 | | 193 | 70 | 130 | | | S |

| Sample ID: 2212d48-002amsd | SampType: MSD | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-----------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: OW-1 | Batch ID: R93580 | | | RunNo: 93580 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377271 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.49 | 0.050 | 0.5000 | 0 | 98.0 | 70 | 130 | 2.44 | 20 | |
| Surr: BFB | 39 | | 20.00 | | 196 | 70 | 130 | 0 | 0 | S |

| Sample ID: 2.5ug gro lcs | SampType: LCS | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|---------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93606 | | | RunNo: 93606 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377664 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.54 | 0.050 | 0.5000 | 0 | 108 | 80 | 120 | | | |
| Surr: BFB | 47 | | 20.00 | | 236 | 70 | 130 | | | S |

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | |
|-----------------------|----------------------------------|-----|-----------|---|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93606 | | | RunNo: 93606 | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | | SeqNo: 3377665 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93606 | | RunNo: 93606 | | | | | | | |
| Prep Date: | Analysis Date: 12/28/2022 | | SeqNo: 3377665 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 106 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93684 | | RunNo: 93684 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3381603 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 92.3 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 92.5 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.7 | 70 | 130 | | | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 84.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 17 | 1.0 | 20.00 | 0 | 85.8 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.5 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.7 | | 10.00 | | 96.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.7 | | 10.00 | | 87.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.0 | | 10.00 | | 90.2 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93684 | | RunNo: 93684 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3381621 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93684 | | | RunNo: 93684 | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | | SeqNo: 3381621 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93684 | RunNo: 93684 | | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | SeqNo: 3381621 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 94.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 97.9 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72320 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72320 | | | RunNo: 93714 | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/4/2023 | | | SeqNo: 3382778 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 67 | | 200.0 | | 33.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 54 | | 200.0 | | 26.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 90 | | 200.0 | | 44.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 46 | | 100.0 | | 46.5 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 36 | | 100.0 | | 36.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 76 | | 100.0 | | 76.0 | 34.4 | 134 | | | |

| Sample ID: lcs-72320 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72320 | | | RunNo: 93714 | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/4/2023 | | | SeqNo: 3382779 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-72320 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72320 | | RunNo: 93714 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/4/2023 | | SeqNo: 3382779 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 58 | 10 | 100.0 | 0 | 57.8 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 43.7 | 15 | 89.8 | | | |
| Phenol | 83 | 20 | 200.0 | 0 | 41.7 | 17 | 61.1 | | | |
| Pyrene | 86 | 10 | 100.0 | 0 | 86.4 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 51.1 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 38.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 78.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 69 | | 100.0 | | 68.7 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 95 | | 100.0 | | 95.0 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-72320 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72320 | | RunNo: 93714 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/4/2023 | | SeqNo: 3382780 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 62.8 | 21.3 | 104 | 8.34 | 45.3 | |
| 1,4-Dichlorobenzene | 46 | 5.0 | 100.0 | 0 | 45.5 | 15 | 89.8 | 4.21 | 39.6 | |
| Phenol | 85 | 20 | 200.0 | 0 | 42.7 | 17 | 61.1 | 2.45 | 42.5 | |
| Pyrene | 88 | 10 | 100.0 | 0 | 88.1 | 61 | 123 | 1.98 | 11.8 | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 51.8 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 83 | | 200.0 | | 41.6 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 160 | | 200.0 | | 82.3 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 74 | | 100.0 | | 74.2 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 64 | | 100.0 | | 64.0 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 106 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72320 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72320 | | RunNo: 93681 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/3/2023 | | SeqNo: 3381436 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 41 | | 100.0 | | 41.0 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 70 | | 200.0 | | 35.1 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 34.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 79 | | 100.0 | | 78.6 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72320-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72320 | | RunNo: 93681 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/3/2023 | | SeqNo: 3381437 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.66 | 0.30 | 2.000 | 0 | 33.0 | 15 | 60.5 | | | |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 53.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.0 | 0.30 | 2.000 | 0 | 52.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 92 | | | |
| Fluorene | 1.3 | 0.30 | 2.000 | 0 | 63.0 | 15 | 96 | | | |
| Phenanthrene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 21 | 103 | | | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 32.8 | 119 | | | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 73.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 32 | 132 | | | |
| Chrysene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 83.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.2 | 0.30 | 2.000 | 0 | 111 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 102.0 | | 60.4 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212D48

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-72320-If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72320 | | RunNo: 93681 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/3/2023 | | SeqNo: 3381437 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 92 | | 204.0 | | 45.2 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 102.0 | | 51.6 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 87 | | 102.0 | | 85.2 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-72320-If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72320 | | RunNo: 93681 | | | | | | | |
| Prep Date: 12/27/2022 | Analysis Date: 1/3/2023 | | SeqNo: 3381438 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.66 | 0.30 | 2.000 | 0 | 33.0 | 15 | 60.5 | 0 | 29.7 | |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 78.3 | 7.41 | 31.7 | |
| 1-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 79.6 | 5.50 | 31.4 | |
| 2-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 78.6 | 5.61 | 30.5 | |
| Acenaphthene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 15 | 92 | 5.13 | 30.5 | |
| Fluorene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 96 | 4.65 | 25.1 | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21 | 103 | 5.63 | 26.4 | |
| Anthracene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 21.1 | 106 | 5.26 | 14.4 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 32.8 | 119 | 4.65 | 14.8 | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 76.0 | 34.1 | 110 | 4.03 | 19.2 | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 32 | 132 | 5.46 | 29.3 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 31.3 | 112 | 3.82 | 19 | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 87.0 | 34.1 | 119 | 4.71 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.4 | 0.30 | 2.000 | 0 | 120 | 24.7 | 152 | 7.79 | 21.3 | |
| Surr: Nitrobenzene-d5 | 64 | | 102.0 | | 62.4 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 96 | | 204.0 | | 46.9 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 53 | | 102.0 | | 51.9 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 92 | | 102.0 | | 90.2 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawks NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212D48**

RepID: **1**

Received By: **Joseph Alderette** 12/23/2022 8:00:00 AM

Completed By: **Isaiah Ortiz** 12/23/2022 9:15:11 AM

Reviewed By: *JA 12-23-22*

IOX

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

9
18/16
KPA 12.23.22

Adjusted? NO

Checked by: *KPA 12.23.22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 3.1 | Good | Not Present | | | |
| 2 | 1.6 | Good | Not Present | | | |
| 3 | 1.9 | Good | Not Present | | | |
| 4 | 0.4 | Good | Not Present | | | |
| 5 | 1.1 | Good | Not Present | | | |



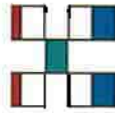
Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212D46**

ReptNo: **1**



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| | | | |
|---|--|-------------------|----------|
| X Standard | | Rush | |
| Project Name: | | | |
| 2022 GW Sampling 4th Quarter | | | |
| Project #: 687-080-001 | | | |
| Project Manager:
Lesli Alexander | | | |
| Sampler: | | | |
| On Ice: ☒ Yes ☐ No | | | |
| # of Coolers: 5 | | | |
| Cooler Temp (recording only): See remarks | | | |
| Container Type and # | | Preservative Type | HEAL No. |
| 13 | | | 7212D48 |
| 13 | | | 001 |
| 13 | | | 002 |
| 13 | | | 003 |
| 13 | | | 004 |
| 13 | | | 005 |
| 13 | | | 006 |
| 13 | | | 007 |
| 13 | | | 008 |
| 3 | | | 009 |
| 13 | | | 010 |
| | | | 011 |
| Received by: | | Via: | Date |
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Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 17, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212E09

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/28/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212E09
Date: 1/17/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for samples OW-55 and OW-66.

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|--------------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | Analyst: RAA | | | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/3/2023 8:47:11 PM | R93693 |
| Surr: BFB | 90.4 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 8:47:11 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | Analyst: JR | | | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 93.6 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 115 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Surr: Dibromofluoromethane | 87.2 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 5:47:24 PM | R93710 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 5:47:24 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 12/30/2022 4:09:22 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.041 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 2:35:19 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 2:35:19 PM | 72386 |
| Surr: DNOP | 109 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 2:35:19 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: 2-Fluorophenol | 47.0 | 0 | 15-84.5 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: Phenol-d5 | 35.1 | 0 | 15-67 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: 2,4,6-Tribromophenol | 66.2 | 0 | 15-108 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: Nitrobenzene-d5 | 63.2 | 0 | 16.8-112 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 58.6 | 0 | 15-101 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 85.8 | 0 | 34.4-134 | | %Rec | 1 | 1/6/2023 6:59:55 PM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 6:21:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.1 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 56.6 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 6:21:00 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 6:21:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 9:24:43 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:31:57 PM | 72409 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:31:57 PM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:31:57 PM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:31:57 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000099 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:40:40 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 9:30:00 AM

Lab ID: 2212E09-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Vanadium | 0.0017 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 7:36:24 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:10:19 PM | A93855 |
| Arsenic | ND | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:10:19 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:10:19 PM | A93855 |
| Selenium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:10:19 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:42:49 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.062 | 0.0090 | 0.050 | | mg/L | 1 | 1/3/2023 9:10:38 PM | R93693 |
| Surr: BFB | 90.3 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 9:10:38 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | 69 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 89.9 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 118 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Surr: Dibromofluoromethane | 84.1 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:15:57 PM | R93710 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:15:57 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 4:24:17 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.023 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 2:59:21 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 2:59:21 PM | 72386 |
| Surr: DNOP | 99.7 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 2:59:21 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: 2-Fluorophenol | 39.5 | 0 | 15-84.5 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: Phenol-d5 | 30.1 | 0 | 15-67 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: 2,4,6-Tribromophenol | 54.4 | 0 | 15-108 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: Nitrobenzene-d5 | 51.6 | 0 | 16.8-112 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 46.4 | 0 | 15-101 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 74.5 | 0 | 34.4-134 | | %Rec | 1 | 1/6/2023 7:40:48 PM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 7:05:00 PM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.1 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Surr: 2-Fluorobiphenyl | 51.4 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 7:05:00 PM | R93725 |
| Surr: 4-Terphenyl-d14 | 102 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 7:05:00 PM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.052 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 3:49:22 PM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 3:49:22 PM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| Zinc | 0.0044 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 9:34:24 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:34:23 PM | 72409 |
| Arsenic | 0.0023 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:34:23 PM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:34:23 PM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:34:23 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:44:57 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-50

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:00:00 AM

Lab ID: 2212E09-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.053 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Vanadium | 0.0025 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| Zinc | 0.0073 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 7:41:01 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:15:39 PM | A93855 |
| Arsenic | 0.0028 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:15:39 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:15:39 PM | A93855 |
| Selenium | 0.0019 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:15:39 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:47:06 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/3/2023 9:34:06 PM | R93693 |
| Surr: BFB | 89.0 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 9:34:06 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | 7.3 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 90.6 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 118 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Surr: Dibromofluoromethane | 84.3 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:44:30 PM | R93710 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:44:30 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 4:53:56 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.045 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 3:23:09 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 3:23:09 PM | 72386 |
| Surr: DNOP | 103 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 3:23:09 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: 2-Fluorophenol | 49.3 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: Phenol-d5 | 36.6 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: 2,4,6-Tribromophenol | 65.5 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: Nitrobenzene-d5 | 69.3 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: 2-Fluorobiphenyl | 59.9 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| Surr: 4-Terphenyl-d14 | 92.4 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 10:07:20 AM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 7:48:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.1 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 62.0 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 7:48:00 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 113 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 7:48:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.027 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 3:52:08 PM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 3:52:08 PM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| Zinc | 0.0092 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 9:37:39 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:36:50 PM | 72409 |
| Arsenic | 0.00045 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/5/2023 3:36:50 PM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:36:50 PM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:36:50 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000097 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:49:15 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-52

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 10:30:00 AM

Lab ID: 2212E09-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.028 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Vanadium | 0.0027 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 7:46:49 PM | B93766 |
| Zinc | 0.014 | 0.0032 | 0.010 | | mg/L | 1 | 1/9/2023 11:41:08 AM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:20:58 PM | A93855 |
| Arsenic | 0.00096 | 0.00057 | 0.0010 | J | mg/L | 1 | 1/10/2023 1:20:58 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:20:58 PM | A93855 |
| Selenium | 0.0012 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:20:58 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:55:40 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 2.7 | 0.0090 | 0.050 | | mg/L | 1 | 1/3/2023 9:57:33 PM | R93693 |
| Surr: BFB | 87.5 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 9:57:33 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Toluene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Ethylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | 3200 | 20 | 20 | | µg/L | 20 | 1/4/2023 7:13:04 PM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Acetone | ND | 20 | 20 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Bromomethane | ND | 6.0 | 6.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 2-Butanone | ND | 20 | 20 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Carbon disulfide | ND | 20 | 20 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Chlorobenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Chloroform | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Chloromethane | ND | 6.0 | 6.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| cis-1,2-DCE | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 1,1-Dichloroethane | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 1,1-Dichloroethene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Isopropylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 4-Isopropyltoluene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Methylene Chloride | ND | 6.0 | 6.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| n-Butylbenzene | ND | 6.0 | 6.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| n-Propylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| sec-Butylbenzene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Styrene | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Trichloroethene (TCE) | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Vinyl chloride | ND | 2.0 | 2.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Xylenes, Total | ND | 3.0 | 3.0 | | µg/L | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 85.9 | 0 | 70-130 | | %Rec | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 112 | 0 | 70-130 | | %Rec | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Surr: Dibromofluoromethane | 84.9 | 0 | 70-130 | | %Rec | 2 | 1/4/2023 7:41:35 PM | R93710 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 2 | 1/4/2023 7:41:35 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 5:08:48 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.43 | 0.016 | 0.064 | B | mg/L | 1 | 1/5/2023 3:47:07 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 3:47:07 PM | 72386 |
| Surr: DNOP | 101 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 3:47:07 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: 2-Fluorophenol | 46.3 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: Phenol-d5 | 35.5 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: 2,4,6-Tribromophenol | 75.2 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: Nitrobenzene-d5 | 65.8 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: 2-Fluorobiphenyl | 57.0 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| Surr: 4-Terphenyl-d14 | 86.4 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 10:48:22 AM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.86 | 0.11 | 1.0 | J | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 8:31:00 PM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.9 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Surr: 2-Fluorobiphenyl | 55.9 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 8:31:00 PM | R93725 |
| Surr: 4-Terphenyl-d14 | 94.8 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 8:31:00 PM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.086 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 3:55:07 PM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 3:55:07 PM | 72409 |
| Nickel | 0.029 | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 9:40:57 AM | 72409 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 3:55:07 PM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:39:17 PM | 72409 |
| Arsenic | 0.0014 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:39:17 PM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:39:17 PM | 72409 |
| Selenium | 0.0012 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:39:17 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000097 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 8:57:49 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:15:00 AM

Lab ID: 2212E09-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.091 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Nickel | 0.028 | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Vanadium | 0.0025 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 7:52:44 PM | B93766 |
| Zinc | 0.024 | 0.0032 | 0.010 | | mg/L | 1 | 1/9/2023 11:50:36 AM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:26:18 PM | A93855 |
| Arsenic | 0.0016 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:26:18 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:26:18 PM | A93855 |
| Selenium | 0.0069 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:26:18 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/6/2023 8:59:58 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 1.4 | 0.0090 | 0.050 | | mg/L | 1 | 1/3/2023 10:21:01 PM | R93693 |
| Surr: BFB | 96.0 | 0 | 70-130 | | %Rec | 1 | 1/3/2023 10:21:01 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Toluene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Ethylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | 1300 | 50 | 50 | | µg/L | 50 | 1/4/2023 8:10:06 PM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Acetone | ND | 50 | 50 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Bromomethane | ND | 15 | 15 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 2-Butanone | ND | 50 | 50 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Carbon disulfide | ND | 50 | 50 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Chlorobenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Chloroform | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Chloromethane | ND | 15 | 15 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| cis-1,2-DCE | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 1,1-Dichloroethane | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 1,1-Dichloroethene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Isopropylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 4-Isopropyltoluene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Methylene Chloride | ND | 15 | 15 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| n-Butylbenzene | ND | 15 | 15 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| n-Propylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| sec-Butylbenzene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Styrene | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Trichloroethene (TCE) | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Vinyl chloride | ND | 5.0 | 5.0 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Xylenes, Total | ND | 7.5 | 7.5 | | µg/L | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 102 | 0 | 70-130 | | %Rec | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 111 | 0 | 70-130 | | %Rec | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Surr: Dibromofluoromethane | 88.6 | 0 | 70-130 | | %Rec | 5 | 1/4/2023 8:38:37 PM | R93710 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 5 | 1/4/2023 8:38:37 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/30/2022 5:23:44 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.2 | 0.016 | 0.064 | B | mg/L | 1 | 1/5/2023 4:34:58 PM | 72386 |
| Motor Oil Range Organics (MRO) | 0.16 | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 4:34:58 PM | 72386 |
| Surr: DNOP | 106 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 4:34:58 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: 2-Fluorophenol | 45.6 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: Phenol-d5 | 34.8 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: 2,4,6-Tribromophenol | 79.2 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: Nitrobenzene-d5 | 63.0 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: 2-Fluorobiphenyl | 52.9 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| Surr: 4-Terphenyl-d14 | 83.4 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 11:29:34 AM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.84 | 0.11 | 1.0 | J | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| 1-Methylnaphthalene | 0.20 | 0.15 | 0.30 | J | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 9:14:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 62.5 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 49.6 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 9:14:00 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 79.7 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 9:14:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.55 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:05:28 PM | 72409 |
| Beryllium | 0.0012 | 0.00060 | 0.0020 | J | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Cadmium | 0.0027 | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Chromium | 0.0087 | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Cobalt | 0.085 | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:05:28 PM | 72409 |
| Nickel | 0.23 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Vanadium | 0.027 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 9:44:11 AM | 72409 |
| Zinc | 0.023 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 4:05:28 PM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:41:43 PM | 72409 |
| Arsenic | 0.0054 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:41:43 PM | 72409 |
| Lead | 0.039 | 0.00097 | 0.0025 | * | mg/L | 5 | 1/5/2023 4:26:40 PM | 72409 |
| Selenium | 0.0028 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:41:43 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00023 | 0.000091 | 0.00020 | | mg/L | 1 | 1/6/2023 9:02:05 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-54

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 11:45:00 AM

Lab ID: 2212E09-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.17 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Cobalt | 0.073 | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Nickel | 0.21 | 0.0033 | 0.010 | * | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Vanadium | 0.0051 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| Zinc | 0.0058 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 7:58:28 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:31:38 PM | A93855 |
| Arsenic | 0.0040 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:31:38 PM | A93855 |
| Lead | 0.0050 | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:31:38 PM | A93855 |
| Selenium | 0.0092 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:31:38 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000099 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:04:14 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|--------------|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: RAA | | |
| Gasoline Range Organics (GRO) | 240 | 0.45 | 2.5 | | mg/L | 50 | 1/3/2023 10:44:30 PM | R93693 |
| Surr: BFB | 95.1 | 0 | 70-130 | | %Rec | 50 | 1/3/2023 10:44:30 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: JR | | |
| Benzene | 35000 | 500 | 500 | | µg/L | 500 | 1/4/2023 9:07:08 PM | R93710 |
| Toluene | 45000 | 500 | 500 | | µg/L | 500 | 1/4/2023 9:07:08 PM | R93710 |
| Ethylbenzene | 1900 | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Methyl tert-butyl ether (MTBE) | 850 | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,2,4-Trimethylbenzene | 1900 | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,3,5-Trimethylbenzene | 600 | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Acetone | ND | 500 | 500 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Bromomethane | ND | 150 | 150 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 2-Butanone | ND | 500 | 500 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Carbon disulfide | ND | 500 | 500 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Chlorobenzene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Chloroform | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Chloromethane | ND | 150 | 150 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| cis-1,2-DCE | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,1-Dichloroethane | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,1-Dichloroethene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Isopropylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 4-Isopropyltoluene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Methylene Chloride | ND | 150 | 150 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| n-Butylbenzene | ND | 150 | 150 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| n-Propylbenzene | 74 | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| sec-Butylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Styrene | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Tetrachloroethene (PCE) | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| 1,1,1-Trichloroethane | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Trichloroethene (TCE) | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Vinyl chloride | ND | 50 | 50 | | µg/L | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Xylenes, Total | 20000 | 750 | 750 | | µg/L | 500 | 1/4/2023 9:07:08 PM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 94.3 | 0 | 70-130 | | %Rec | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Surr: 4-Bromofluorobenzene | 91.8 | 0 | 70-130 | | %Rec | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Surr: Dibromofluoromethane | 74.5 | 0 | 70-130 | | %Rec | 50 | 1/4/2023 9:35:35 PM | R93710 |
| Surr: Toluene-d8 | 109 | 0 | 70-130 | | %Rec | 50 | 1/4/2023 9:35:35 PM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/30/2022 5:38:38 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 6.9 | 0.032 | 0.13 | B | mg/L | 2 | 1/6/2023 3:49:43 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.10 | 0.16 | D | mg/L | 2 | 1/6/2023 3:49:43 PM | 72386 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 2 | 1/6/2023 3:49:43 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 2,4-Dimethylphenol | 18 | 5.8 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 1-Methylnaphthalene | 26 | 4.3 | 5.0 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 2-Methylnaphthalene | 46 | 4.2 | 5.0 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 2-Methylphenol | 32 | 5.0 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 3+4-Methylphenol | 62 | 5.1 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Naphthalene | 190 | 3.2 | 5.0 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Phenol | 46 | 18 | 20 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | S | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: Phenol-d5 | 40.1 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: 2,4,6-Tribromophenol | 85.7 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: Nitrobenzene-d5 | 71.0 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 60.7 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 86.6 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 12:10:48 PM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.4 | 0.11 | 1.0 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Acenaphthene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Fluorene | 0.72 | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Phenanthrene | 0.84 | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 10:52:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.5 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 56.6 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 10:52:00 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 84.9 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 10:52:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|---------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.7 | 0.0079 | 0.015 | * | mg/L | 5 | 1/9/2023 4:11:51 PM | 72409 |
| Beryllium | 0.00076 | 0.00060 | 0.0020 | J | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Chromium | 0.0061 | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Cobalt | 0.0040 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/9/2023 4:08:31 PM | 72409 |
| Nickel | 0.33 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Vanadium | 0.027 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 9:47:01 AM | 72409 |
| Zinc | 0.012 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 4:08:31 PM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:44:10 PM | 72409 |
| Arsenic | 0.0098 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:44:10 PM | 72409 |
| Lead | 0.021 | 0.00019 | 0.00050 | * | mg/L | 1 | 1/5/2023 3:44:10 PM | 72409 |
| Selenium | 0.0018 | 0.00089 | 0.0010 | | mg/L | 1 | 1/5/2023 3:44:10 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:06:22 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-66

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:05:00 PM

Lab ID: 2212E09-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.3 | 0.0056 | 0.010 | * | mg/L | 5 | 1/5/2023 8:19:10 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Nickel | 0.30 | 0.0033 | 0.010 | * | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Vanadium | 0.0062 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| Zinc | 0.0070 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 8:15:52 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:36:57 PM | A93855 |
| Arsenic | 0.011 | 0.00057 | 0.0010 | * | mg/L | 1 | 1/10/2023 1:36:57 PM | A93855 |
| Lead | 0.00085 | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:36:57 PM | A93855 |
| Selenium | 0.0059 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:36:57 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:08:31 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 27 | 0.45 | 2.5 | | mg/L | 50 | 1/3/2023 11:54:45 PM | R93693 |
| Surr: BFB | 94.8 | 0 | 70-130 | | %Rec | 50 | 1/3/2023 11:54:45 PM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 4800 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Toluene | 360 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Ethylbenzene | 420 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Methyl tert-butyl ether (MTBE) | 790 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,2,4-Trimethylbenzene | 250 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,3,5-Trimethylbenzene | 76 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Acetone | ND | 500 | 500 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Bromomethane | ND | 150 | 150 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 2-Butanone | ND | 500 | 500 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Carbon disulfide | ND | 500 | 500 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Chlorobenzene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Chloroform | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Chloromethane | ND | 150 | 150 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| cis-1,2-DCE | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,1-Dichloroethane | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,1-Dichloroethene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Isopropylbenzene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 4-Isopropyltoluene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Methylene Chloride | ND | 150 | 150 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| n-Butylbenzene | ND | 150 | 150 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| n-Propylbenzene | 59 | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| sec-Butylbenzene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Styrene | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Tetrachloroethene (PCE) | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| 1,1,1-Trichloroethane | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Trichloroethene (TCE) | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Vinyl chloride | ND | 50 | 50 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Xylenes, Total | 1000 | 75 | 75 | D | µg/L | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 85.9 | 0 | 70-130 | D | %Rec | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Surr: 4-Bromofluorobenzene | 109 | 0 | 70-130 | D | %Rec | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Surr: Dibromofluoromethane | 75.5 | 0 | 70-130 | D | %Rec | 50 | 1/5/2023 12:25:52 AM | R93710 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | D | %Rec | 50 | 1/5/2023 12:25:52 AM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/30/2022 5:53:30 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 4.4 | 0.032 | 0.13 | B | mg/L | 2 | 1/6/2023 4:13:22 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.10 | 0.16 | D | mg/L | 2 | 1/6/2023 4:13:22 PM | 72386 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 2 | 1/6/2023 4:13:22 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Bis(2-ethylhexyl)phthalate | 10 | 8.4 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 1-Methylnaphthalene | 28 | 4.3 | 5.0 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Naphthalene | 22 | 3.2 | 5.0 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Phenol | 24 | 18 | 20 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: 2-Fluorophenol | 44.8 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: Phenol-d5 | 35.9 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: 2,4,6-Tribromophenol | 75.7 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: Nitrobenzene-d5 | 61.3 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 55.5 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 86.0 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 12:52:16 PM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.2 | 0.11 | 1.0 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| 2-Methylnaphthalene | 16 | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Acenaphthene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Fluorene | 2.1 | 0.095 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Phenanthrene | 2.0 | 0.16 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Anthracene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/4/2023 11:34:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.3 | 0 | 15-108 | | %Rec | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 47.4 | 0 | 15-107 | | %Rec | 1 | 1/4/2023 11:34:00 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 86.4 | 0 | 15-166 | | %Rec | 1 | 1/4/2023 11:34:00 PM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.80 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:14:24 PM | 72409 |
| Beryllium | 0.0018 | 0.00060 | 0.0020 | J | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Chromium | 0.0081 | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Cobalt | 0.036 | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:14:24 PM | 72409 |
| Nickel | 0.25 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Vanadium | 0.036 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 9:56:09 AM | 72409 |
| Zinc | 0.040 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 4:14:24 PM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:55:00 PM | 72409 |
| Arsenic | 0.0095 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:55:00 PM | 72409 |
| Lead | 0.013 | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:55:00 PM | 72409 |
| Selenium | 0.0048 | 0.00089 | 0.0010 | | mg/L | 1 | 1/13/2023 12:39:59 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:10:40 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-55

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022 12:30:00 PM

Lab ID: 2212E09-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.56 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Cobalt | 0.0057 | 0.0024 | 0.0060 | J | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Nickel | 0.22 | 0.0033 | 0.010 | * | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Vanadium | 0.0057 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| Zinc | 0.0041 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 8:21:56 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:42:15 PM | A93855 |
| Arsenic | 0.0059 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:42:15 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:42:15 PM | A93855 |
| Selenium | 0.0042 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:42:15 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/6/2023 9:12:48 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212E09-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 86.9 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Surr: 4-Bromofluorobenzene | 116 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Surr: Dibromofluoromethane | 80.7 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 12:54:12 AM | R93710 |
| Surr: Toluene-d8 | 102 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 12:54:12 AM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.063 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 12:18:08 AM | R93693 |
| Surr: BFB | 91.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 12:18:08 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Methyl tert-butyl ether (MTBE) | 64 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 94.3 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Surr: 4-Bromofluorobenzene | 123 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Surr: Dibromofluoromethane | 83.0 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:22:32 AM | R93710 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:22:32 AM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/30/2022 6:08:18 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.059 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 5:46:26 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 5:46:26 PM | 72386 |
| Surr: DNOP | 109 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 5:46:26 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: 2-Fluorophenol | 47.0 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: Phenol-d5 | 36.4 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: 2,4,6-Tribromophenol | 68.7 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: Nitrobenzene-d5 | 60.7 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: 2-Fluorobiphenyl | 55.1 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| Surr: 4-Terphenyl-d14 | 82.2 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 1:33:44 PM | 72347 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 12:17:00 AM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.9 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Surr: 2-Fluorobiphenyl | 55.1 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 12:17:00 AM | 72347 |
| Surr: 4-Terphenyl-d14 | 100 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 12:17:00 AM | 72347 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.049 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:17:41 PM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:17:41 PM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 9:59:04 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/5/2023 3:59:57 PM | 72409 |
| Arsenic | 0.0021 | 0.00022 | 0.0010 | | mg/L | 1 | 1/5/2023 3:59:57 PM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/5/2023 3:59:57 PM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/13/2023 12:42:26 PM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:14:57 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-27-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/27/2022

Lab ID: 2212E09-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.053 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Vanadium | 0.0021 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 8:27:56 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 1:47:34 PM | A93855 |
| Arsenic | 0.0026 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 1:47:34 PM | A93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 1:47:34 PM | A93855 |
| Selenium | 0.0017 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 1:47:34 PM | A93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/6/2023 9:21:21 AM | 72446 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E09

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212E09-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Surr: 1,2-Dichloroethane-d4 | 90.7 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Surr: 4-Bromofluorobenzene | 116 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Surr: Dibromofluoromethane | 81.4 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:50:49 AM | R93710 |
| Surr: Toluene-d8 | 100 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:50:49 AM | R93710 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212E09-010B

Client Sample ID: Trip Blank

Collection Date:

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: SB | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 12/30/2022 6:23:08 AM | 72358 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



ANALYTICAL REPORT

January 03, 2023

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1571459

Samples Received: 12/29/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
| 2212E09-001F EB-12-27-22 L1571459-01 | 5 | |
| 2212E09-002F OW-50 L1571459-02 | 6 | <div><div>4</div>Cn</div> |
| 2212E09-003F OW-52 L1571459-03 | 7 | <div><div>5</div>Sr</div> |
| 2212E09-004F OW-29 L1571459-04 | 8 | |
| 2212E09-005F OW-54 L1571459-05 | 9 | <div><div>6</div>Qc</div> |
| 2212E09-006F OW-66 L1571459-06 | 10 | |
| 2212E09-007F OW-55 L1571459-07 | 11 | <div><div>7</div>Gl</div> |
| 2212E09-009F DUP-12-27-22 L1571459-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 4500CN E-2016 | 13 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 16 | |
| Al: Accreditations & Locations | 17 | |
| Sc: Sample Chain of Custody | 18 | |

2212E09-001F EB-12-27-22 L1571459-01 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 09:30 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 18:04 | LDT | Mt. Juliet, TN |

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

2212E09-002F OW-50 L1571459-02 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 10:00 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 18:05 | LDT | Mt. Juliet, TN |

2212E09-003F OW-52 L1571459-03 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 10:30 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 18:06 | LDT | Mt. Juliet, TN |

2212E09-004F OW-29 L1571459-04 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 11:15 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 18:07 | LDT | Mt. Juliet, TN |

2212E09-005F OW-54 L1571459-05 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 11:45 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1980984 | 1 | 12/30/22 08:29 | 12/30/22 18:08 | LDT | Mt. Juliet, TN |

2212E09-006F OW-66 L1571459-06 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 12:05 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:15 | JCS | Mt. Juliet, TN |

2212E09-007F OW-55 L1571459-07 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 12:30 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:18 | JCS | Mt. Juliet, TN |

2212E09-009F DUP-12-27-22 L1571459-08 WW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/27/22 00:00 | 12/29/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:23 | JCS | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 18:04 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 18:05 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/30/2022 18:06 | WG1980984 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|-----------|-------------|----------|-------------------------|---------------------------|
| Cyanide | 0.00500 | | 0.00500 | 1 | 12/30/2022 18:07 | WG1980984 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00583 | | 0.00500 | 1 | 12/30/2022 18:08 | WG1980984 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0108 | | 0.00500 | 1 | 01/02/2023 09:15 | WG1981929 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00645 | | 0.00500 | 1 | 01/02/2023 09:18 | WG1981929 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/02/2023 09:23 | WG1981929 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

L1571459-01,02,03,04,05

Method Blank (MB)

(MB) R3877001-1 12/30/22 17:35

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1571184-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1571184-06 12/30/22 17:50 • (DUP) R3877001-3 12/30/22 17:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1571184-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1571184-07 12/30/22 17:52 • (DUP) R3877001-4 12/30/22 17:53

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3877001-2 12/30/22 17:36

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0882 | 88.2 | 87.1-120 | |

L1571184-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-08 12/30/22 17:54 • (MS) R3877001-5 12/30/22 17:55 • (MSD) R3877001-6 12/30/22 17:56

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0910 | 0.0913 | 91.0 | 91.3 | 1 | 90.0-110 | | | 0.329 | 20 |

L1571184-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-09 12/30/22 17:59 • (MS) R3877001-7 12/30/22 18:00 • (MSD) R3877001-8 12/30/22 18:01

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0893 | 0.0914 | 89.3 | 91.4 | 1 | 90.0-110 | J6 | | 2.32 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

[L1571459-01,02,03,04,05](#)

L1571184-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571184-09 12/30/22 17:59 • (MS) R3877001-7 12/30/22 18:00 • (MSD) R3877001-8 12/30/22 18:01

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | <u>MS Qualifier</u> | <u>MSD Qualifier</u> | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|---------------------|----------------------|-----|------------|
| | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |

Sample Narrative:

MS: Matrix spike failure due to matrix.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3877142-1 01/02/23 09:09

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|---------|
| Analyte | mg/l | | mg/l | mg/l |
| Cyanide | U | | 0.00180 | 0.00500 |

L1571459-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1571459-06 01/02/23 09:15 • (DUP) R3877142-3 01/02/23 09:16

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Cyanide | 0.0108 | 0.0118 | 1 | 8.85 | | 20 |

L1571581-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1571581-02 01/02/23 09:26 • (DUP) R3877142-6 01/02/23 09:27

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3877142-2 01/02/23 09:10

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Cyanide | 0.100 | 0.0981 | 98.1 | 87.1-120 | |

L1571459-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571459-07 01/02/23 09:18 • (MS) R3877142-4 01/02/23 09:19 • (MSD) R3877142-5 01/02/23 09:22

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | 0.00645 | 0.0974 | 0.0983 | 91.0 | 91.9 | 1 | 90.0-110 | | | 0.920 | 20 |

L1571740-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571740-02 01/02/23 09:34 • (MS) R3877142-7 01/02/23 09:35 • (MSD) R3877142-8 01/02/23 09:36

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | ND | 0.0977 | 0.0955 | 97.7 | 95.5 | 1 | 90.0-110 | | | 2.28 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

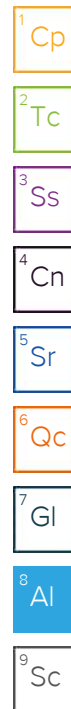
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

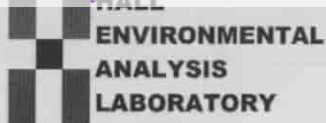
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

J038

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|---|--------------|-------------------------|-------------|------------------------------|------------------------|----------------------------|--|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2212E09-001F | EB-12-27-22 | 500AMBHDP | Groundw | 12/27/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212E09-002F | OW-50 | 500AMBHDP | Groundw | 12/27/2022 10:00:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212E09-003F | OW-52 | 500AMBHDP | Groundw | 12/27/2022 10:30:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212E09-004F | OW-29 | 500AMBHDP | Groundw | 12/27/2022 11:15:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2212E09-005F | OW-54 | 500AMBHDP | Groundw | 12/27/2022 11:45:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2212E09-006F | OW-66 | 500AMBHDP | Groundw | 12/27/2022 12:05:00 PM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2212E09-007F | OW-55 | 500AMBHDP | Groundw | 12/27/2022 12:30:00 PM | 1 | Total Cyanide J and MDL -07 |
| 8 | 2212E09-009F | Dup-12-27-22 | 500AMBHDP | Groundw | 12/27/2022 | 1 | Total Cyanide J and MDL -08 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

0201 7708 9m 387

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|-------------------------|----------------------|---------------------------------|-----------------------|-------------------|--|--|
| Relinquished By: <u>I-O</u> | Date: <u>12/28/2022</u> | Time: <u>8:18 AM</u> | Received By: <u>[Signature]</u> | Date: <u>12/29/22</u> | Time: <u>0900</u> | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY
Temp of samples <u>2.5+0=2.5</u> °C <u>KFAL</u> Attempt to Cool? _____
Comments: _____ | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72409 | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 72409 | | RunNo: 93794 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386096 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0045 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72409 | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 72409 | | RunNo: 93794 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386097 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0030 | 0.002000 | 0 | 124 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Chromium | 0.0072 | 0.0060 | 0.006000 | 0 | 120 | 50 | 150 | | | |
| Cobalt | 0.0084 | 0.0060 | 0.006000 | 0 | 140 | 50 | 150 | | | |
| Nickel | 0.0070 | 0.010 | 0.005000 | 0 | 139 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 106 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.013 | 0.010 | 0.01000 | 0 | 129 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72409 | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 72409 | | RunNo: 93794 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386098 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 85 | 115 | | | |
| Cadmium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.56 | 0.050 | 0.5000 | 0 | 111 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3384999 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385000 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 88.9 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 97.1 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 112 | 50 | 150 | | | |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 68.9 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 97.0 | 50 | 150 | | | J |
| Vanadium | 0.0099 | 0.050 | 0.01000 | 0 | 99.4 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 101 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385001 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93838 | | RunNo: 93838 | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | | SeqNo: 3387404 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93838 | | RunNo: 93838 | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | | SeqNo: 3387405 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 112 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93838 | | RunNo: 93838 | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | | SeqNo: 3387406 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212E09-003EMS | SampType: MS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: OW-52 | Batch ID: A93838 | | RunNo: 93838 | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | | SeqNo: 3387418 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.49 | 0.010 | 0.5000 | 0.01381 | 94.6 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212E09-003EMSD | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: OW-52 | Batch ID: A93838 | | RunNo: 93838 | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | | SeqNo: 3387419 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.01381 | 93.3 | 70 | 130 | 1.30 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: MB-72409 | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
|----------------------------|--------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72409 | RunNo: 93754 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384108 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00062 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: MSLCSLL-72409 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|---------------------------------|--------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 72409 | RunNo: 93754 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384109 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 119 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | J |

| Sample ID: MSLCS-72409 | SampType: LCS | TestCode: EPA 200.8: Metals | | | | | | | | |
|-------------------------------|--------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72409 | RunNo: 93754 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384110 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 93.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.7 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.3 | 85 | 115 | | | |

| Sample ID: MSLCSLL-72409 | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|---------------------------------|--------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: 72409 | RunNo: 93754 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384115 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00069 | 0.0010 | 0.001000 | 0 | 69.0 | 50 | 150 | | | J |

| Sample ID: 2212E09-002DMSLL | SampType: MSD | TestCode: EPA 200.8: Metals | | | | | | | | |
|------------------------------------|--------------------------------|------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: OW-50 | Batch ID: 72409 | RunNo: 93754 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384159 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.4 | 70 | 130 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0.002268 | 100 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.3 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------------|--------------------------------|--|
| Sample ID: 2212E09-001DMSLL | SampType: MS | TestCode: EPA 200.8: Metals |
| Client ID: EB-12-27-22 | Batch ID: 72409 | RunNo: 93754 |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384161 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|----------|--------|---------|-----------|-------------|------|----------|-----------|------|----------|------|
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 99.5 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.4 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 70 | 130 | | | |

| | | |
|------------------------------------|--------------------------------|--|
| Sample ID: 2212E09-001DMSDL | SampType: MSD | TestCode: EPA 200.8: Metals |
| Client ID: EB-12-27-22 | Batch ID: 72409 | RunNo: 93754 |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384162 Units: mg/L |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|----------|--------|---------|-----------|-------------|------|----------|-----------|-------|----------|------|
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 98.9 | 70 | 130 | 0.615 | 20 | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 93.3 | 70 | 130 | 5.31 | 20 | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.7 | 70 | 130 | 2.37 | 20 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals | | | | | | | | |
|-----------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: A93855 | RunNo: 93855 | | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | SeqNo: 3387949 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals | | | | | | | | |
|---------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: BatchQC | Batch ID: A93855 | RunNo: 93855 | | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | SeqNo: 3387950 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 102 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.3 | 50 | 150 | | | J |
| Selenium | 0.00097 | 0.0010 | 0.001000 | 0 | 96.8 | 50 | 150 | | | J |

| Sample ID: LCSD | SampType: LCSD | TestCode: EPA 200.8: Metals | | | | | | | | |
|--------------------------|---------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: A93855 | RunNo: 93855 | | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | SeqNo: 3387952 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | 2.62 | 20 | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | 1.89 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 85 | 115 | 3.90 | 20 | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | 1.01 | 20 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72446 | SampType: MBLK | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: PBW | Batch ID: 72446 | | RunNo: 93761 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | | SeqNo: 3384455 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.000099 | 0.00020 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72446 | SampType: LCSLL | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: BatchQC | Batch ID: 72446 | | RunNo: 93761 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | | SeqNo: 3384456 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00022 | 0.00020 | 0.0001500 | 0 | 144 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72446 | SampType: LCS | | TestCode: EPA Method 245.1: Mercury | | | | | | | |
| Client ID: LCSW | Batch ID: 72446 | | RunNo: 93761 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/6/2023 | | SeqNo: 3384457 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0053 | 0.00020 | 0.005000 | 0 | 107 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72358 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379045 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72358 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379050 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: LCS-72358 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72358 | RunNo: 93623 |
| Prep Date: 12/29/2022 | Analysis Date: 12/29/2022 | SeqNo: 3379931 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 106 70 130 |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72386 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386219 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 87.3 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72386 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386220 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.19 | 0.064 | 0.1875 | 0 | 100 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.021 | | 0.01875 | | 110 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72386 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386224 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.22 | 0.064 | 0.1875 | 0 | 115 | 31.2 | 125 | 13.9 | 20 | B |
| Surr: DNOP | 0.019 | | 0.01875 | | 102 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382018 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.4 | 80 | 120 | | | |
| Surr: BFB | 37 | | 20.00 | | 183 | 70 | 130 | | | S |

| | | | | | | | | | | |
|------------------------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212e09-006a msd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-66 | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382026 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 260 | 2.5 | 25.00 | 244.1 | 79.5 | 70 | 130 | 3.51 | 20 | |
| Surr: BFB | 1900 | | 1000 | | 191 | 70 | 130 | 0 | 0 | S |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382038 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 88.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-----|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212e09-006a ms | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-66 | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382039 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 250 | 2.5 | 25.00 | 244.1 | 43.0 | 70 | 130 | | | S |
| Surr: BFB | 1900 | | 1000 | | 192 | 70 | 130 | | | S |

Qualifiers:

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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93710 | | RunNo: 93710 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382555 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 96.7 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 96.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.1 | | 10.00 | | 91.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 110 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.1 | | 10.00 | | 81.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.2 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93710 | | RunNo: 93710 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382584 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93710 | | RunNo: 93710 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382584 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.6 | | 10.00 | | 85.8 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 114 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 8.2 | | 10.00 | | 81.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
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QC SUMMARY REPORT

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WO#: 2212E09

17-Jan-23

Client: Marathon

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| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb-72347 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: PBW | Batch ID: 72347 | | | RunNo: 93784 | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/6/2023 | | | SeqNo: 3385641 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 99 | | 200.0 | | 49.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 78 | | 200.0 | | 38.9 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 67.3 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 63.7 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.1 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 93 | | 100.0 | | 92.5 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: lcs-72347 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
| Client ID: LCSW | Batch ID: 72347 | | | RunNo: 93784 | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/6/2023 | | | SeqNo: 3385642 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: ics-72347 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72347 | | RunNo: 93784 | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/6/2023 | | SeqNo: 3385642 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 54 | 10 | 100.0 | 0 | 54.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 37.9 | 15 | 89.8 | | | |
| Phenol | 78 | 20 | 200.0 | 0 | 39.0 | 17 | 61.1 | | | |
| Pyrene | 87 | 10 | 100.0 | 0 | 87.3 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 92 | | 200.0 | | 46.0 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.2 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 130 | | 200.0 | | 63.0 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 59 | | 100.0 | | 59.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 51 | | 100.0 | | 50.8 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 92 | | 100.0 | | 92.1 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: icsd-72347 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72347 | | RunNo: 93784 | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/6/2023 | | SeqNo: 3385643 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 65 | 10 | 100.0 | 0 | 64.6 | 21.3 | 104 | 17.8 | 45.3 | |
| 1,4-Dichlorobenzene | 51 | 5.0 | 100.0 | 0 | 51.4 | 15 | 89.8 | 30.2 | 39.6 | |
| Phenol | 89 | 20 | 200.0 | 0 | 44.4 | 17 | 61.1 | 13.0 | 42.5 | |
| Pyrene | 94 | 10 | 100.0 | 0 | 93.9 | 61 | 123 | 7.24 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.5 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 41.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 85.6 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.6 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 63 | | 100.0 | | 62.5 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 34.4 | 134 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72406 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386698 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 58.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 55 | | 100.0 | | 55.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 46 | | 100.0 | | 45.9 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 34.4 | 134 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: Ics-72406 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386699 | Units: %Rec | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 94 | | 200.0 | | 46.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 37.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 64.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.3 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-----|--|--------------------|------|----------|-----------|------|----------|------|
| Sample ID: lcSD-72406 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386700 | Units: %Rec | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.4 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 72 | | 200.0 | | 35.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 72.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 58.4 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.1 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.2 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72347 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72347 | RunNo: 93725 | | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383316 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 63.9 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 51.3 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 104 | 15 | 166 | | | |

| Sample ID: lcs-72347-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72347 | RunNo: 93725 | | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383317 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.62 | 1.0 | 2.000 | 0 | 31.0 | 15 | 60.5 | | | J |
| Naphthalene | 0.56 | 0.30 | 2.000 | 0 | 28.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.50 | 0.30 | 2.000 | 0 | 25.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 0.48 | 0.30 | 2.000 | 0 | 24.0 | 15 | 78.6 | | | |
| Acenaphthene | 0.56 | 0.30 | 2.000 | 0 | 28.0 | 15 | 92 | | | |
| Fluorene | 0.78 | 0.30 | 2.000 | 0 | 39.0 | 15 | 96 | | | |
| Phenanthrene | 1.2 | 0.30 | 2.000 | 0 | 58.0 | 21 | 103 | | | |
| Anthracene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 32.8 | 119 | | | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 74.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 32 | 132 | | | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 85.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.4 | 0.30 | 2.000 | 0 | 121 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 59 | | 102.0 | | 57.8 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: Ics-72347-If | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72347 | | RunNo: 93725 | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/4/2023 | | SeqNo: 3383317 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 97 | | 204.0 | | 47.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 102.0 | | 48.5 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 71 | | 102.0 | | 69.3 | 15 | 166 | | | |

| Sample ID: Icsd-72347-If | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 72347 | | RunNo: 93725 | | | | | | | |
| Prep Date: 12/28/2022 | Analysis Date: 1/4/2023 | | SeqNo: 3383318 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.72 | 1.0 | 2.000 | 0 | 36.0 | 15 | 60.5 | 14.9 | 29.7 | J |
| Naphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 15 | 78.3 | 30.3 | 31.7 | |
| 1-Methylnaphthalene | 0.68 | 0.30 | 2.000 | 0 | 34.0 | 15 | 79.6 | 30.5 | 31.4 | |
| 2-Methylnaphthalene | 0.64 | 0.30 | 2.000 | 0 | 32.0 | 15 | 78.6 | 28.6 | 30.5 | |
| Acenaphthene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 15 | 92 | 27.7 | 30.5 | |
| Fluorene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 96 | 22.7 | 25.1 | |
| Phenanthrene | 1.4 | 0.30 | 2.000 | 0 | 69.0 | 21 | 103 | 17.3 | 26.4 | |
| Anthracene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 21.1 | 106 | 12.2 | 14.4 | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 32.8 | 119 | 10.2 | 14.8 | |
| Pyrene | 1.6 | 1.0 | 2.000 | 0 | 82.0 | 34.1 | 110 | 10.3 | 19.2 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 104 | 32 | 132 | 9.05 | 29.3 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 31.3 | 112 | 8.38 | 19 | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 91.0 | 34.1 | 119 | 6.82 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 126 | 24.7 | 152 | 4.05 | 21.3 | |
| Surr: Nitrobenzene-d5 | 71 | | 102.0 | | 69.9 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 53.0 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 61 | | 102.0 | | 59.4 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 82 | | 102.0 | | 80.4 | 15 | 166 | 0 | 0 | |

| Sample ID: mb-72406 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
|----------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383328 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 45.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 15 | 166 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E09

17-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72406-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383329 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 67 | | 102.0 | | 65.7 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 55.4 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 102.0 | | 56.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 102.0 | | 100 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72406-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383330 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 76 | | 102.0 | | 74.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 204.0 | | 57.9 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 102.0 | | 64.1 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 102.0 | | 95.1 | 15 | 166 | 0 | 0 | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-343-3975 FAX: 505-343-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212E09**

ReptNo: 1

Received By: **Cheyenne Cason**

12/28/2022 8:00:00 AM

Completed By: **Isaiah Ortiz**

12/28/2022 8:12:42 AM

Reviewed By: **TMC**

12/28/22

Unit

I-OK

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
 (Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
 (If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

168
(<2 or >12 unless noted)

Adjusted?

yes

Checked by:

ju 12/28/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks: *0.1ml of HNO_3 (70%) was added to sample 006E for pH 2. ju 12/28/22.*

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 4.6 | Good | Yes | | | |
| 2 | 1.4 | Good | Yes | | | |
| 3 | 0.2 | Good | Yes | | | |
| 4 | 1.6 | Good | Yes | | | |

| | | |
|---|----------|------|
| X | Standard | Rush |
|---|----------|------|

4901 Hawkins NE - Albuquerque, NM 87109

Tel 505-345-3975 Fax 505-345-4107

Analysis Request

MR
XO
S
pa

10/10/2010 10:00 AM

14. DEFENDANT'S PLEDGE

ap
Al
ive
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or
HY

CC
P/P
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SSC
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| | | | | | | | | |
|------|------|------|------|------|----|----|-----|----|
| 11.5 | 0.44 | 0.41 | 0.77 | 0.71 | CS | CS | C-3 | BV |
|------|------|------|------|------|----|----|-----|----|

| | | | | | | | | | |
|----|----|----|----|----|----|-----|-----|-----|----|
| 60 | 70 | 70 | 15 | 20 | 20 | 245 | 504 | 335 | 37 |
|----|----|----|----|----|----|-----|-----|-----|----|

[illegible]

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| X |
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| X |
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| X |
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|---|---|---|---|---|---|---|---|---|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|-----|

[illegible][illegible]

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Cover photograph

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ility. Any sub-contracted data will be clearly marked on the analysis.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 19, 2023

Emily Conkling
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212E57

Dear Emily Conkling:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/29/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", with a stylized flourish at the end.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212E57
Date: 1/19/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B". The laboratory control spike for DRO/MRO had an elevated recovery for OW-67, OW-68, OW60, Dup 12-28-22.

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8015 GRO:

The surrogate recoveries for OW-56, OW59, OW67, OW 68 and OW60 all had elevated surrogate recoveries because of matrix interference. A large peak was detected at the same retention time as the surrogate.

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 12:41:32 AM | R93693 |
| Surr: BFB | 87.4 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 12:41:32 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 96.8 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 94.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:04:17 PM | R93727 |
| Surr: Toluene-d8 | 93.7 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:04:17 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 1/4/2023 10:55:42 AM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.025 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 6:10:00 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 6:10:00 PM | 72386 |
| Surr: DNOP | 102 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 6:10:00 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: 2-Fluorophenol | 37.4 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: Phenol-d5 | 28.1 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 62.0 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: Nitrobenzene-d5 | 48.1 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 40.7 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 87.4 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 4:19:47 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 3:08:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 48.0 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 41.8 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 3:08:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 3:08:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:21:30 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:21:30 AM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:02:05 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 9:48:21 AM | 72409 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 9:48:21 AM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 9:48:21 AM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 9:48:21 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00018 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/11/2023 5:32:55 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 8:30:00 AM

Lab ID: 2212E57-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Vanadium | 0.0020 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 8:33:43 PM | B93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 2:03:34 PM | B93855 |
| Arsenic | ND | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 2:03:34 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 2:03:34 PM | B93855 |
| Selenium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 2:03:34 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000091 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/11/2023 7:11:06 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:00:00 AM

Lab ID: 2212E57-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.098 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 1:04:55 AM | R93693 |
| Surr: BFB | 86.8 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 1:04:55 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | 97 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 90.1 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 96.5 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Surr: Dibromofluoromethane | 91.7 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:31:19 PM | R93727 |
| Surr: Toluene-d8 | 91.3 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:31:19 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:00:00 AM

Lab ID: 2212E57-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 11:10:35 AM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:00:00 AM

Lab ID: 2212E57-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.061 | 0.016 | 0.064 | JB | mg/L | 1 | 1/5/2023 6:33:29 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 6:33:29 PM | 72386 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 6:33:29 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: 2-Fluorophenol | 50.3 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: Phenol-d5 | 38.5 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 69.1 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: Nitrobenzene-d5 | 66.3 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 57.1 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 86.6 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 5:01:29 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 3:51:00 AM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-13**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/28/2022 9:00:00 AM**Lab ID:** 2212E57-002C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 71.4 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Surr: 2-Fluorobiphenyl | 64.0 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 3:51:00 AM | R93725 |
| Surr: 4-Terphenyl-d14 | 121 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 3:51:00 AM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:00:00 AM

Lab ID: 2212E57-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.019 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:31:21 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:31:21 AM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:07:09 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:32:19 AM | 72409 |
| Arsenic | 0.00061 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/6/2023 10:32:19 AM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:32:19 AM | 72409 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:32:19 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/11/2023 7:13:15 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-13

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:00:00 AM

Lab ID: 2212E57-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.020 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Vanadium | 0.0040 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 8:38:16 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 2:19:32 PM | B93855 |
| Arsenic | 0.0013 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 2:19:32 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 2:19:32 PM | B93855 |
| Selenium | 0.0022 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 2:19:32 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00020 | 0.000091 | 0.00020 | J | mg/L | 1 | 1/11/2023 7:15:23 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.22 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 1:28:12 AM | R93693 |
| Surr: BFB | 551 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 1:28:12 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 1.9 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | 14 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,2,4-Trimethylbenzene | 1.4 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,2-Dichloroethane (EDC) | 5.2 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Isopropylbenzene | 3.0 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Xylenes, Total | 2.1 | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 124 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Surr: Dibromofluoromethane | 144 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 6:58:21 PM | R93727 |
| Surr: Toluene-d8 | 93.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:58:21 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 11:25:27 AM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.82 | 0.016 | 0.064 | B | mg/L | 1 | 1/5/2023 6:56:56 PM | 72386 |
| Motor Oil Range Organics (MRO) | 0.15 | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 6:56:56 PM | 72386 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 6:56:56 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: 2-Fluorophenol | 49.7 | 0 | 15-84.5 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: Phenol-d5 | 39.5 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 70.7 | 0 | 15-108 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: Nitrobenzene-d5 | 61.2 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 55.9 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 87.5 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 5:42:53 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.22 | 0.11 | 1.0 | J | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 4:35:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 59.9 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 50.8 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 4:35:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 87.3 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 4:35:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.46 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:36:22 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Cobalt | 0.0073 | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:36:22 AM | 72409 |
| Nickel | 0.078 | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Vanadium | 0.0057 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| Zinc | 0.011 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:19:48 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 9:53:15 AM | 72409 |
| Arsenic | 0.0048 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 9:53:15 AM | 72409 |
| Lead | 0.0015 | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 9:53:15 AM | 72409 |
| Selenium | 0.0023 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 9:53:15 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00029 | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:17:32 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-56

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 9:45:00 AM

Lab ID: 2212E57-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.39 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Nickel | 0.074 | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| Zinc | 0.0033 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 8:55:35 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 2:30:10 PM | B93855 |
| Arsenic | 0.0042 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 2:30:10 PM | B93855 |
| Lead | 0.00022 | 0.000099 | 0.00050 | J | mg/L | 1 | 1/10/2023 2:30:10 PM | B93855 |
| Selenium | 0.0075 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 2:30:10 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00022 | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:19:40 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:10:00 AM

Lab ID: 2212E57-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.26 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 1:51:29 AM | R93693 |
| Surr: BFB | 5320 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 1:51:29 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | 12 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 97.5 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Surr: Dibromofluoromethane | 110 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:25:22 PM | R93727 |
| Surr: Toluene-d8 | 97.1 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:25:22 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:10:00 AM

Lab ID: 2212E57-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 1/4/2023 11:40:18 AM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:10:00 AM

Lab ID: 2212E57-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.50 | 0.016 | 0.064 | B | mg/L | 1 | 1/5/2023 7:20:21 PM | 72386 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/5/2023 7:20:21 PM | 72386 |
| Surr: DNOP | 101 | 0 | 15.9-177 | | %Rec | 1 | 1/5/2023 7:20:21 PM | 72386 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: 2-Fluorophenol | 9.65 | 0 | 15-84.5 | S | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: Phenol-d5 | 26.4 | 0 | 15-67 | | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 5.51 | 0 | 15-108 | S | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: Nitrobenzene-d5 | 59.0 | 0 | 16.8-112 | | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 51.7 | 0 | 15-101 | | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 86.1 | 0 | 34.4-134 | | %Rec | 1 | 1/9/2023 6:24:12 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 5.4 | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Fluoranthene | 0.14 | 0.14 | 0.30 | J | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 5:19:00 AM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** OW-59**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/28/2022 10:10:00 AM**Lab ID:** 2212E57-004C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 65.3 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Surr: 2-Fluorobiphenyl | 57.1 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 5:19:00 AM | R93725 |
| Surr: 4-Terphenyl-d14 | 107 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 5:19:00 AM | R93725 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:10:00 AM

Lab ID: 2212E57-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.066 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:37:48 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Cobalt | 0.0087 | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:37:48 AM | 72409 |
| Nickel | 0.044 | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Vanadium | 0.0094 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| Zinc | 0.011 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:21:14 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 1/6/2023 10:34:47 AM | 72409 |
| Arsenic | 0.0048 | 0.0011 | 0.0050 | J | mg/L | 5 | 1/6/2023 10:34:47 AM | 72409 |
| Lead | 0.0013 | 0.00097 | 0.0025 | J | mg/L | 5 | 1/6/2023 10:34:47 AM | 72409 |
| Selenium | 0.0069 | 0.0044 | 0.0050 | | mg/L | 5 | 1/6/2023 10:34:47 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:21:49 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-59

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:10:00 AM

Lab ID: 2212E57-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.0079 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Beryllium | 0.00072 | 0.00059 | 0.0020 | J | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Nickel | 0.031 | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Silver | 0.0028 | 0.0013 | 0.0050 | J | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Vanadium | 0.0061 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 9:13:27 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 2:35:30 PM | B93855 |
| Arsenic | 0.0044 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 2:35:30 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 2:35:30 PM | B93855 |
| Selenium | 0.019 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 2:35:30 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:23:57 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.077 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 2:14:44 AM | R93693 |
| Surr: BFB | 607 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 2:14:44 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | 26 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Surr: Dibromofluoromethane | 97.3 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:52:20 PM | R93727 |
| Surr: Toluene-d8 | 89.9 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:52:20 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 11:55:13 AM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.67 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 12:27:42 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.060 | 0.052 | 0.080 | J | mg/L | 1 | 1/9/2023 12:27:42 PM | 72395 |
| Surr: DNOP | 103 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 12:27:42 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: 2-Fluorophenol | 1.92 | 0 | 15-84.5 | S | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: Phenol-d5 | 6.32 | 0 | 15-67 | S | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: 2,4,6-Tribromophenol | 2.88 | 0 | 15-108 | S | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: Nitrobenzene-d5 | 59.3 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 51.2 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 87.2 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 10:16:55 AM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.1 | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 6:03:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 63.5 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 53.6 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 6:03:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 6:03:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 1/11/2023 8:46:47 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Cobalt | 0.032 | 0.0035 | 0.0060 | | mg/L | 1 | 1/11/2023 8:46:47 AM | 72409 |
| Nickel | 0.12 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| Zinc | 0.0073 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:22:42 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 1/6/2023 10:37:13 AM | 72409 |
| Arsenic | 0.0034 | 0.0011 | 0.0050 | J | mg/L | 5 | 1/6/2023 10:37:13 AM | 72409 |
| Lead | 0.0059 | 0.00097 | 0.0025 | | mg/L | 5 | 1/6/2023 10:37:13 AM | 72409 |
| Selenium | 0.0067 | 0.0044 | 0.0050 | | mg/L | 5 | 1/6/2023 10:37:13 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:26:06 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-67

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 10:30:00 AM

Lab ID: 2212E57-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.042 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Nickel | 0.085 | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Silver | 0.014 | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Vanadium | 0.0063 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 9:20:09 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0023 | 0.0050 | | mg/L | 5 | 1/11/2023 1:10:17 PM | A93877 |
| Arsenic | ND | 0.0029 | 0.0050 | | mg/L | 5 | 1/11/2023 1:10:17 PM | A93877 |
| Lead | 0.00053 | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 2:40:49 PM | B93855 |
| Selenium | 0.031 | 0.0028 | 0.0050 | | mg/L | 5 | 1/11/2023 1:10:17 PM | A93877 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:28:16 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:00:00 AM

Lab ID: 2212E57-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.85 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 2:38:04 AM | R93693 |
| Surr: BFB | 2720 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 2:38:04 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 6.8 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Ethylbenzene | 3.9 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,2,4-Trimethylbenzene | 1.4 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Isopropylbenzene | 1.4 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| n-Propylbenzene | 2.2 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Xylenes, Total | 4.0 | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Surr: Dibromofluoromethane | 96.1 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:19:17 PM | R93727 |
| Surr: Toluene-d8 | 97.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:19:17 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:00:00 AM

Lab ID: 2212E57-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 12:10:04 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:00:00 AM

Lab ID: 2212E57-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 1.7 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 12:51:45 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.12 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 12:51:45 PM | 72395 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 12:51:45 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: 2-Fluorophenol | 3.37 | 0 | 15-84.5 | S | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: Phenol-d5 | 10.7 | 0 | 15-67 | S | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: 2,4,6-Tribromophenol | 5.87 | 0 | 15-108 | S | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: Nitrobenzene-d5 | 64.8 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 57.6 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 88.3 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 10:58:05 AM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.1 | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Acenaphthene | 0.46 | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Fluorene | 0.12 | 0.095 | 0.30 | J | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 6:47:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212E57-006C

Client Sample ID: OW-68

Collection Date: 12/28/2022 11:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.3 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 42.5 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 6:47:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 69.8 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 6:47:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:00:00 AM

Lab ID: 2212E57-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.43 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:40:40 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Chromium | 0.0060 | 0.0020 | 0.0060 | J | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Cobalt | 0.086 | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:40:40 AM | 72409 |
| Nickel | 0.20 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Vanadium | 0.045 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| Zinc | 0.045 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:24:09 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 1/6/2023 10:39:40 AM | 72409 |
| Arsenic | 0.019 | 0.0011 | 0.0050 | * | mg/L | 5 | 1/6/2023 10:39:40 AM | 72409 |
| Lead | 0.013 | 0.00097 | 0.0025 | | mg/L | 5 | 1/6/2023 10:39:40 AM | 72409 |
| Selenium | 0.0065 | 0.0044 | 0.0050 | | mg/L | 5 | 1/6/2023 10:39:40 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:30:26 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-68

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:00:00 AM

Lab ID: 2212E57-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.046 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Cobalt | 0.068 | 0.0024 | 0.0060 | | mg/L | 1 | 1/17/2023 3:20:16 PM | A94009 |
| Nickel | 0.15 | 0.0033 | 0.010 | * | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Silver | 0.0065 | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Vanadium | 0.012 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| Zinc | 0.0069 | 0.0032 | 0.010 | J | mg/L | 1 | 1/5/2023 9:38:55 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 2:46:09 PM | B93855 |
| Arsenic | 0.019 | 0.00057 | 0.0010 | * | mg/L | 1 | 1/10/2023 2:46:09 PM | B93855 |
| Lead | 0.0029 | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 2:46:09 PM | B93855 |
| Selenium | 0.017 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 2:46:09 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:41:06 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 3:01:20 AM | R93693 |
| Surr: BFB | 134 | 0 | 70-130 | S | %Rec | 1 | 1/4/2023 3:01:20 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 96.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 110 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Surr: Dibromofluoromethane | 95.8 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:46:17 PM | R93727 |
| Surr: Toluene-d8 | 94.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 8:46:17 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 12:24:59 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.15 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 1:15:34 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.12 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 1:15:34 PM | 72395 |
| Surr: DNOP | 116 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 1:15:34 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: 2-Fluorophenol | 12.2 | 0 | 15-84.5 | S | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: Phenol-d5 | 20.8 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: 2,4,6-Tribromophenol | 7.99 | 0 | 15-108 | S | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: Nitrobenzene-d5 | 40.8 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 33.2 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 70.6 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 11:39:12 AM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 7:32:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 33.4 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 27.1 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 7:32:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 60.6 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 7:32:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.036 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:42:04 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Cobalt | 0.0054 | 0.0035 | 0.0060 | J | mg/L | 1 | 1/10/2023 10:42:04 AM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Vanadium | 0.011 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| Zinc | 0.012 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:25:34 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:03:01 AM | 72409 |
| Arsenic | 0.0015 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:03:01 AM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:03:01 AM | 72409 |
| Selenium | 0.016 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:03:01 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:43:16 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-60

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.028 | 0.0056 | 0.010 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Beryllium | ND | 0.0029 | 0.010 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Nickel | ND | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Vanadium | 0.015 | 0.0086 | 0.25 | J | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 9:48:44 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:02:11 PM | B93855 |
| Arsenic | ND | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:02:11 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:02:11 PM | B93855 |
| Selenium | 0.034 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:02:11 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:45:25 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022 11:30:00 AM

Lab ID: 2212E57-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 89.6 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Surr: Dibromofluoromethane | 96.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:13:13 PM | R93727 |
| Surr: Toluene-d8 | 95.3 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:13:13 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.094 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 3:24:37 AM | R93693 |
| Surr: BFB | 87.5 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 3:24:37 AM | R93693 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Methyl tert-butyl ether (MTBE) | 99 | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Surr: 4-Bromofluorobenzene | 97.2 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:40:08 PM | R93727 |
| Surr: Toluene-d8 | 86.5 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 9:40:08 PM | R93727 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 1/4/2023 12:39:44 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.059 | 0.016 | 0.064 | JBE | mg/L | 1 | 1/9/2023 1:39:24 PM | 72395 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 1:39:24 PM | 72395 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 1:39:24 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: 2-Fluorophenol | 36.9 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: Phenol-d5 | 29.9 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 62.6 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: Nitrobenzene-d5 | 50.7 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 42.3 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 88.1 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 12:20:33 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 8:16:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 45.5 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 37.1 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 8:16:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 83.5 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 8:16:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.019 | 0.0016 | 0.0030 | | mg/L | 1 | 1/10/2023 10:43:43 AM | 72409 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/10/2023 10:43:43 AM | 72409 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| Zinc | 0.0068 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:27:12 AM | 72409 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:05:27 AM | 72409 |
| Arsenic | 0.00067 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/6/2023 10:05:27 AM | 72409 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:05:27 AM | 72409 |
| Selenium | 0.0011 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:05:27 AM | 72409 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:47:33 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-28-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/28/2022

Lab ID: 2212E57-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.022 | 0.011 | 0.020 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Beryllium | ND | 0.0059 | 0.020 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Cadmium | ND | 0.0098 | 0.020 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Chromium | ND | 0.020 | 0.060 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Cobalt | ND | 0.024 | 0.060 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Nickel | ND | 0.033 | 0.10 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Silver | ND | 0.013 | 0.050 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Vanadium | ND | 0.017 | 0.50 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| Zinc | ND | 0.032 | 0.10 | | mg/L | 10 | 1/9/2023 11:53:28 AM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:07:30 PM | B93855 |
| Arsenic | 0.0010 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:07:30 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:07:30 PM | B93855 |
| Selenium | 0.0022 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:07:30 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/11/2023 7:53:59 PM | 72553 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212E57-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Surr: Dibromofluoromethane | 94.1 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:49:47 PM | R93747 |
| Surr: Toluene-d8 | 96.1 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 1:49:47 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212E57

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | Trip Blank |
| Project: | 2022 GW Sampling 4th Quarter | Collection Date: | |
| Lab ID: | 2212E57-010B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 1/4/2023 1:09:25 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



ANALYTICAL REPORT

January 03, 2023

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1571740

Samples Received: 12/30/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---------------------------------------|----|---------------------------|
| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
| Tc: Table of Contents | 2 | |
| Ss: Sample Summary | 3 | <div><div>2</div>Tc</div> |
| Cn: Case Narrative | 4 | |
| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
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| 2212E57-002F OW-13 L1571740-02 | 6 | <div><div>4</div>Cn</div> |
| 2212E57-003F OW-56 L1571740-03 | 7 | <div><div>5</div>Sr</div> |
| 2212E57-004F OW-59 L1571740-04 | 8 | |
| 2212E57-005F OW-67 L1571740-05 | 9 | <div><div>6</div>Qc</div> |
| 2212E57-006F OW-68 L1571740-06 | 10 | |
| 2212E57-007F OW-60 L1571740-07 | 11 | <div><div>7</div>Gl</div> |
| 2212E57-008F DUP-12-28-22 L1571740-08 | 12 | <div><div>8</div>Al</div> |
| Qc: Quality Control Summary | 13 | |
| Wet Chemistry by Method 4500CN E-2016 | 13 | <div><div>9</div>Sc</div> |
| Gl: Glossary of Terms | 14 | |
| Al: Accreditations & Locations | 15 | |
| Sc: Sample Chain of Custody | 16 | |

2212E57-001F EB-12-28-22 L1571740-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 08:30 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:31 | JCS | Mt. Juliet, TN |

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

2212E57-002F OW-13 L1571740-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 09:00 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:34 | JCS | Mt. Juliet, TN |

2212E57-003F OW-56 L1571740-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 09:45 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:37 | JCS | Mt. Juliet, TN |

2212E57-004F OW-59 L1571740-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 10:10 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:38 | JCS | Mt. Juliet, TN |

2212E57-005F OW-67 L1571740-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 10:30 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:39 | JCS | Mt. Juliet, TN |

2212E57-006F OW-68 L1571740-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 11:00 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:40 | JCS | Mt. Juliet, TN |

2212E57-007F OW-60 L1571740-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 11:30 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:41 | JCS | Mt. Juliet, TN |

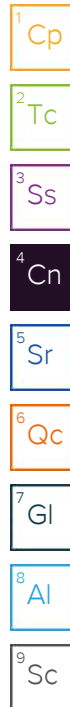
2212E57-008F DUP-12-28-22 L1571740-08 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/28/22 00:00 | 12/30/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1981929 | 1 | 01/01/23 17:23 | 01/02/23 09:42 | JCS | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/02/2023 09:31 | WG1981929 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Collected date/time: 12/28/22 09:00

L1571740

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/02/2023 09:34 | WG1981929 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/28/22 09:45

L1571740

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00584 | | 0.00500 | 1 | 01/02/2023 09:37 | WG1981929 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 12/28/22 10:10

L1571740

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0194 | | 0.00500 | 1 | 01/02/2023 09:38 | WG1981929 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/28/22 10:30

L1571740

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0314 | | 0.00500 | 1 | 01/02/2023 09:39 | WG1981929 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0119 | | 0.00500 | 1 | 01/02/2023 09:40 | WG1981929 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00710 | | 0.00500 | 1 | 01/02/2023 09:41 | WG1981929 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis
date / time | Batch |
|---------|--------|-----------|---------|----------|-------------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/02/2023 09:42 | WG1981929 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

L1571740-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3877142-1 01/02/23 09:09

| | MB Result | MB Qualifier | MB MDL | MB RDL |
|---------|-----------|--------------|---------|---------|
| Analyte | mg/l | | mg/l | mg/l |
| Cyanide | U | | 0.00180 | 0.00500 |

L1571459-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1571459-06 01/02/23 09:15 • (DUP) R3877142-3 01/02/23 09:16

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Cyanide | 0.0108 | 0.0118 | 1 | 8.85 | | 20 |

L1571581-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1571581-02 01/02/23 09:26 • (DUP) R3877142-6 01/02/23 09:27

| | Original Result | DUP Result | Dilution | DUP RPD | DUP Qualifier | DUP RPD Limits |
|---------|-----------------|------------|----------|---------|---------------|----------------|
| Analyte | mg/l | mg/l | | % | | % |
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3877142-2 01/02/23 09:10

| | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---------|--------------|------------|----------|-------------|---------------|
| Analyte | mg/l | mg/l | % | % | |
| Cyanide | 0.100 | 0.0981 | 98.1 | 87.1-120 | |

L1571459-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571459-07 01/02/23 09:18 • (MS) R3877142-4 01/02/23 09:19 • (MSD) R3877142-5 01/02/23 09:22

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|-------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | 0.00645 | 0.0974 | 0.0983 | 91.0 | 91.9 | 1 | 90.0-110 | | | 0.920 | 20 |

L1571740-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1571740-02 01/02/23 09:34 • (MS) R3877142-7 01/02/23 09:35 • (MSD) R3877142-8 01/02/23 09:36

| | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---------|--------------|-----------------|-----------|------------|---------|----------|----------|-------------|--------------|---------------|------|------------|
| Analyte | mg/l | mg/l | mg/l | mg/l | % | % | | % | | | % | % |
| Cyanide | 0.100 | ND | 0.0977 | 0.0955 | 97.7 | 95.5 | 1 | 90.0-110 | | | 2.28 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

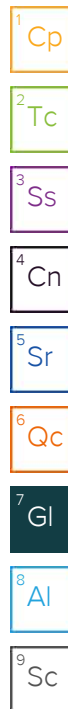
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



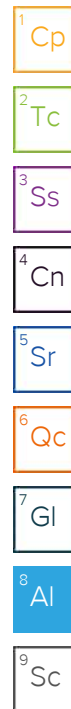
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

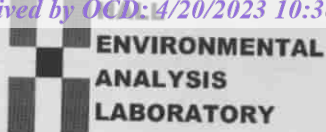
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|------------------------|--------------|-------------------------|
| 1 | 2212E57-001F | EB-12-28-22 | 500AMBHDP | Groundw | 12/28/2022 8:30:00 AM | 1 | Total Cyanide J and MDL |
| 2 | 2212E57-002F | OW-13 | 500AMBHDP | Groundw | 12/28/2022 9:00:00 AM | 1 | Total Cyanide J and MDL |
| 3 | 2212E57-003F | OW-56 | 500AMBHDP | Groundw | 12/28/2022 9:45:00 AM | 1 | Total Cyanide J and MDL |
| 4 | 2212E57-004F | OW-59 | 500AMBHDP | Groundw | 12/28/2022 10:10:00 AM | 1 | Total Cyanide J and MDL |
| 5 | 2212E57-005F | OW-67 | 500AMBHDP | Groundw | 12/28/2022 10:30:00 AM | 1 | Total Cyanide J and MDL |
| 6 | 2212E57-006F | OW-68 | 500AMBHDP | Groundw | 12/28/2022 11:00:00 AM | 1 | Total Cyanide J and MDL |
| 7 | 2212E57-007F | OW-60 | 500AMBHDP | Groundw | 12/28/2022 11:30:00 AM | 1 | Total Cyanide J and MDL |
| 8 | 2212E57-009F | Dup-12-28-22 | 500AMBHDP | Groundw | 12/28/2022 | 1 | Total Cyanide J and MDL |

L1571740

-01
-02
-03
-04
-05
-06
-07
-08

Sample Receipt Checklist
 COC Seal Present/Intact: ☒ Y ☐ N IF Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☐ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

F086

770907423691 8 received
 NO TB

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|-------------------------|----------------------|---------------------------------|--------------------|-------------------|---|--|
| Relinquished By: <i>CM</i> | Date: 12/29/2022 | Time: 8:03 AM | Received By: <i>[Signature]</i> | Date: 12/30 | Time: 0900 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | Temp of samples KP42 15.0 = 10.6 °C Attempt to Cool? _____ | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72409 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72409 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386096 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | 0.0045 | 0.010 | | | | | | | | J |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72409 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72409 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386097 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0025 | 0.0030 | 0.002000 | 0 | 124 | 50 | 150 | | | J |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 107 | 50 | 150 | | | |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Chromium | 0.0072 | 0.0060 | 0.006000 | 0 | 120 | 50 | 150 | | | |
| Cobalt | 0.0084 | 0.0060 | 0.006000 | 0 | 140 | 50 | 150 | | | |
| Nickel | 0.0070 | 0.010 | 0.005000 | 0 | 139 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 106 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 108 | 50 | 150 | | | J |
| Zinc | 0.013 | 0.010 | 0.01000 | 0 | 129 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72409 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72409 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386098 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 85 | 115 | | | |
| Cadmium | 0.54 | 0.0020 | 0.5000 | 0 | 107 | 85 | 115 | | | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.56 | 0.050 | 0.5000 | 0 | 111 | 85 | 115 | | | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 104 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|-------------|------------------------------------|----------|-------------|------|----------|------|
| Sample ID: 2212E57-001DMS | | SampType: MS | | | TestCode: EPA Method 200.7: Metals | | | | | |
| Client ID: EB-12-28-22 | | Batch ID: 72409 | | | RunNo: 93794 | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/9/2023 | | | SeqNo: 3386134 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.57 | 0.0020 | 0.5000 | 0 | 114 | 70 | 130 | | | |
| Cadmium | 0.56 | 0.0020 | 0.5000 | 0 | 112 | 70 | 130 | | | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Nickel | 0.56 | 0.010 | 0.5000 | 0 | 111 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 109 | 70 | 130 | | | |
| Vanadium | 0.56 | 0.050 | 0.5000 | 0 | 112 | 70 | 130 | | | |
| Zinc | 0.64 | 0.010 | 0.5000 | 0 | 127 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212E57-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-12-28-22 | | Batch ID: 72409 | | RunNo: 93794 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/9/2023 | | SeqNo: 3386135 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Beryllium | 0.56 | 0.0020 | 0.5000 | 0 | 112 | 70 | 130 | 1.10 | 20 | |
| Cadmium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | 1.95 | 20 | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 105 | 70 | 130 | 1.71 | 20 | |
| Nickel | 0.54 | 0.010 | 0.5000 | 0 | 109 | 70 | 130 | 2.30 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | 1.46 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 108 | 70 | 130 | 3.09 | 20 | |
| Zinc | 0.62 | 0.010 | 0.5000 | 0 | 125 | 70 | 130 | 1.82 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212E57-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-13 | | Batch ID: 72409 | | RunNo: 93794 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/9/2023 | | SeqNo: 3386137 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.60 | 0.0030 | 0.5000 | 0.02348 | 115 | 70 | 130 | | | |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Nickel | 0.53 | 0.010 | 0.5000 | 0 | 105 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 107 | 70 | 130 | | | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Zinc | 0.61 | 0.010 | 0.5000 | 0 | 122 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2212E57-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-13 | | Batch ID: 72409 | | RunNo: 93794 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/9/2023 | | SeqNo: 3386138 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.60 | 0.0030 | 0.5000 | 0.02348 | 114 | 70 | 130 | 0.799 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|-------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2212E57-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-13 | | Batch ID: 72409 | | RunNo: 93794 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/9/2023 | | SeqNo: 3386138 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cadmium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 1.24 | 20 | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 70 | 130 | 1.99 | 20 | |
| Nickel | 0.52 | 0.010 | 0.5000 | 0 | 104 | 70 | 130 | 1.65 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 105 | 70 | 130 | 1.77 | 20 | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 107 | 70 | 130 | 0.491 | 20 | |
| Zinc | 0.60 | 0.010 | 0.5000 | 0 | 119 | 70 | 130 | 2.35 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212E57-001DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-12-28-22 | | Batch ID: 72409 | | RunNo: 93841 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/10/2023 | | SeqNo: 3387491 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.4 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212E57-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-12-28-22 | | Batch ID: 72409 | | RunNo: 93841 | | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/10/2023 | | SeqNo: 3387492 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0 | 103 | 70 | 130 | 2.42 | 20 | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 96.0 | 70 | 130 | 2.51 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|--------------------------|-----------|------------------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2212E57-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-13 | | Batch ID: 72409 | | | RunNo: 93841 | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/10/2023 | | | SeqNo: 3387497 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0030 | 0.5000 | 0.01949 | 104 | 70 | 130 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 97.0 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|------------------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2212E57-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-13 | | Batch ID: 72409 | | | RunNo: 93841 | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/10/2023 | | | SeqNo: 3387498 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.55 | 0.0030 | 0.5000 | 0.01949 | 107 | 70 | 130 | 2.47 | 20 | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.8 | 70 | 130 | 1.81 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3384999 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385000 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 88.9 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 97.1 | 50 | 150 | | | J |
| Cadmium | 0.0022 | 0.0020 | 0.002000 | 0 | 112 | 50 | 150 | | | |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 104 | 50 | 150 | | | |
| Nickel | 0.0034 | 0.010 | 0.005000 | 0 | 68.9 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 97.0 | 50 | 150 | | | J |
| Vanadium | 0.0099 | 0.050 | 0.01000 | 0 | 99.4 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 101 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385001 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Cobalt | 0.48 | 0.0060 | 0.5000 | 0 | 95.1 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 105 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 97.8 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385002 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385003 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.3 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.7 | 50 | 150 | | | J |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.9 | 50 | 150 | | | J |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Nickel | 0.0049 | 0.010 | 0.005000 | 0 | 97.3 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.5 | 50 | 150 | | | J |
| Vanadium | 0.0098 | 0.050 | 0.01000 | 0 | 98.2 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 110 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385007 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.0 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212E57-003EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: OW-56 | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385128 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.89 | 0.0020 | 0.5000 | 0.3899 | 99.2 | 70 | 130 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 107 | 70 | 130 | | | |
| Cadmium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 70 | 130 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | | | |
| Nickel | 0.57 | 0.010 | 0.5000 | 0.07363 | 99.5 | 70 | 130 | | | |
| Silver | 0.080 | 0.0050 | 0.1000 | 0 | 79.6 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0.003427 | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212E57-003EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: OW-56 | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385129 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.92 | 0.0020 | 0.5000 | 0.3899 | 106 | 70 | 130 | 4.04 | 20 | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 70 | 130 | 3.50 | 20 | |
| Cadmium | 0.55 | 0.0020 | 0.5000 | 0 | 109 | 70 | 130 | 2.89 | 20 | |
| Chromium | 0.52 | 0.0060 | 0.5000 | 0 | 104 | 70 | 130 | 3.32 | 20 | |
| Nickel | 0.59 | 0.010 | 0.5000 | 0.07363 | 103 | 70 | 130 | 2.97 | 20 | |
| Silver | 0.084 | 0.0050 | 0.1000 | 0 | 84.3 | 70 | 130 | 5.83 | 20 | |
| Vanadium | 0.53 | 0.050 | 0.5000 | 0.003427 | 106 | 70 | 130 | 3.71 | 20 | |

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387404 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------|-------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387405 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.6 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.5 | 50 | 150 | | | J |
| Chromium | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Cobalt | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0039 | 0.010 | 0.005000 | 0 | 78.6 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.0096 | 0.050 | 0.01000 | 0 | 96.2 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 112 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------|-------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387406 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.5 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------|--------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A94009 | RunNo: 94009 | | | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | SeqNo: 3393889 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | ND | 0.0060 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|--------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A94009 | RunNo: 94009 | | | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | SeqNo: 3393890 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-------------------------|---------------------------------|--------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: LCSW | Batch ID: A94009 | | | RunNo: 94009 | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | | | SeqNo: 3393891 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72409 | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 72409 | | RunNo: 93754 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384108 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00062 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-72409 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 72409 | | RunNo: 93754 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384109 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 119 | 50 | 150 | | | |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 100 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-72409 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 72409 | | RunNo: 93754 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384110 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 93.9 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 94.7 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.3 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCSLL-72409 | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 72409 | | RunNo: 93754 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384115 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00069 | 0.0010 | 0.001000 | 0 | 69.0 | 50 | 150 | | | J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387953 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS A | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387954 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387955 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387956 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212E57-001EMSL | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: EB-12-28-22 | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387983 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------|-----------|-----------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2212E57-001EMSL | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: EB-12-28-22 | | Batch ID: B93855 | | | RunNo: 93855 | | | | | |
| Prep Date: | | Analysis Date: 1/10/2023 | | | SeqNo: 3387983 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 70 | 130 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 105 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 106 | 70 | 130 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|-----------|---------------|----------------|-----------------------------|-------------|-------|----------|------|
| Sample ID: 2212E57-001EMSDL | | | | SampType: MSD | | TestCode: EPA 200.8: Metals | | | | |
| Client ID: EB-12-28-22 | | Batch ID: B93855 | | | RunNo: 93855 | | | | | |
| Prep Date: | | Analysis Date: 1/10/2023 | | | SeqNo: 3387984 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 110 | 70 | 130 | 1.18 | 20 | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | 1.75 | 20 | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 107 | 70 | 130 | 0.719 | 20 | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 70 | 130 | 0.175 | 20 | |

| | | | | | | | | | | |
|-----------------------------|--------|--------------------------|--------------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: 2212E57-002EMSLL | | | SampType: MS | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: OW-13 | | Batch ID: B93855 | | | RunNo: 93855 | | | | | |
| Prep Date: | | Analysis Date: 1/10/2023 | | | SeqNo: 3387986 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |
| Arsenic | 0.028 | 0.0010 | 0.02500 | 0.001331 | 105 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 107 | 70 | 130 | | | |
| Selenium | 0.029 | 0.0010 | 0.02500 | 0.002211 | 108 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------|--------|--------------------------|-----------|-------------|-----------------------------|----------|-----------|-------------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: A93877 | | | RunNo: 93877 | | | | | |
| Prep Date: | | Analysis Date: 1/11/2023 | | | SeqNo: 3388811 | | | Units: mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------|--------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: A93877 | | RunNo: 93877 | | | | | | |
| Prep Date: | | Analysis Date: 1/11/2023 | | SeqNo: 3388813 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00092 | 0.0010 | 0.001000 | 0 | 92.3 | 50 | 150 | | | J |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93877 | | RunNo: 93877 | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | | SeqNo: 3388813 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 123 | 50 | 150 | | | |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 100 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93877 | | RunNo: 93877 | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | | SeqNo: 3388814 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-72553 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72553 | RunNo: 93945 |
| Prep Date: 1/10/2023 | Analysis Date: 1/11/2023 | SeqNo: 3391884 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-72553 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72553 | RunNo: 93945 |
| Prep Date: 1/10/2023 | Analysis Date: 1/11/2023 | SeqNo: 3391885 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00021 | 0.00020 0.0001500 0 140 50 150 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-72553 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72553 | RunNo: 93945 |
| Prep Date: 1/10/2023 | Analysis Date: 1/11/2023 | SeqNo: 3391886 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 | 0.00020 0.005000 0 101 85 115 |

| | | |
|----------------------------------|---------------------------------|--|
| Sample ID: 2212E57-009DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: Dup-12-28-22 | Batch ID: 72553 | RunNo: 93945 |
| Prep Date: 1/10/2023 | Analysis Date: 1/11/2023 | SeqNo: 3391959 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 | 0.00020 0.005000 0 98.8 75 125 |

| | | |
|-----------------------------------|---------------------------------|--|
| Sample ID: 2212E57-009DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: Dup-12-28-22 | Batch ID: 72553 | RunNo: 93945 |
| Prep Date: 1/10/2023 | Analysis Date: 1/11/2023 | SeqNo: 3391960 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0059 | 0.00020 0.005000 0 118 75 125 17.6 20 |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72430 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385211 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|--------------------------------|--|
| Sample ID: LCS-72430 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385212 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.13 | 0.010 0.1000 0 129 70 130 |

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72430 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385242 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72386 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386219 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 87.3 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72386 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386220 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.19 | 0.064 | 0.1875 | 0 | 100 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.021 | | 0.01875 | | 110 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72386 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72386 | | RunNo: 93783 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/5/2023 | | SeqNo: 3386224 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.22 | 0.064 | 0.1875 | 0 | 115 | 31.2 | 125 | 13.9 | 20 | B |
| Surr: DNOP | 0.019 | | 0.01875 | | 102 | 15.9 | 177 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72395 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72395 | | RunNo: 93843 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | | SeqNo: 3387577 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.034 | | 0.03750 | | 91.0 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72395 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72395 | | RunNo: 93843 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | | SeqNo: 3387578 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.26 | 0.064 | 0.1875 | 0 | 138 | 31.2 | 125 | | | BS |
| Surr: DNOP | 0.020 | | 0.01875 | | 109 | 15.9 | 177 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72395 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72395 | | RunNo: 93843 | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | | SeqNo: 3387579 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.20 | 0.064 | 0.1875 | 0 | 108 | 31.2 | 125 | 25.2 | 20 | BR |
| Surr: DNOP | 0.019 | | 0.01875 | | 104 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382018 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 99.4 | 80 | 120 | | | |
| Surr: BFB | 37 | | 20.00 | | 183 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93693 | | RunNo: 93693 | | | | | | | |
| Prep Date: | Analysis Date: 1/3/2023 | | SeqNo: 3382038 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 88.2 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93727 | | RunNo: 93727 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3383251 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 98.3 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 95.1 | 70 | 130 | | | |
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 98.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 12 | | 10.00 | | 124 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93727 | | RunNo: 93727 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3383268 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93727 | RunNo: 93727 | | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | SeqNo: 3383268 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 89.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 98.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R93747 | RunNo: 93747 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3383858 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.4 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 94.2 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 90.8 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 91.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93747 | RunNo: 93747 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3383879 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93747 | | | RunNo: 93747 | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | | | SeqNo: 3383879 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 94.3 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72406 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72406 | RunNo: 93814 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386698 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 58.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 55 | | 100.0 | | 55.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 46 | | 100.0 | | 45.9 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 34.4 | 134 | | | |

| Sample ID: lcs-72406 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|--------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | RunNo: 93814 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386699 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: lcs-72406 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386699 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 60 | 10 | 100.0 | 0 | 60.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 41 | 5.0 | 100.0 | 0 | 40.6 | 15 | 89.8 | | | |
| Phenol | 83 | 20 | 200.0 | 0 | 41.7 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 74.6 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 94 | | 200.0 | | 46.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 37.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 64.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.3 | 34.4 | 134 | | | |

| Sample ID: lcsd-72406 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386700 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 52 | 10 | 100.0 | 0 | 52.3 | 21.3 | 104 | 13.7 | 45.3 | |
| 1,4-Dichlorobenzene | 39 | 5.0 | 100.0 | 0 | 39.1 | 15 | 89.8 | 3.61 | 39.6 | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.4 | 17 | 61.1 | 8.35 | 42.5 | |
| Pyrene | 74 | 10 | 100.0 | 0 | 74.2 | 61 | 123 | 0.549 | 11.8 | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.4 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 72 | | 200.0 | | 35.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 72.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 58.4 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.1 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.2 | 34.4 | 134 | 0 | 0 | |

| Sample ID: mb-72443 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72443 | | RunNo: 93858 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | SeqNo: 3388040 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 59 | | 200.0 | | 29.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 46 | | 200.0 | | 23.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.3 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 34.0 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 61 | | 100.0 | | 61.2 | 34.4 | 134 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72443 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72443 | | RunNo: 93858 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | SeqNo: 3388041 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 52.3 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 80 | | 200.0 | | 39.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 85.2 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 99 | | 100.0 | | 98.6 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72443 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72443 | | RunNo: 93858 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | SeqNo: 3388042 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 54.2 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 42.1 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 190 | | 200.0 | | 93.6 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.8 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 62.5 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 107 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72406 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|----------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72406 | RunNo: 93725 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3383328 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 45.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 15 | 166 | | | |

| Sample ID: lcs-72406-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | RunNo: 93725 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3383329 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 1.0 | 2.000 | 0 | 34.0 | 15 | 60.5 | | | J |
| Naphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 15 | 92 | | | |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 15 | 96 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21 | 103 | | | |
| Anthracene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 88.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 110 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 101 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.7 | 0.30 | 2.000 | 0 | 134 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 102.0 | | 65.7 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72406-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383329 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 55.4 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 102.0 | | 56.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 102.0 | | 100 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72406-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383330 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 1.0 | 2.000 | 0 | 40.0 | 15 | 60.5 | 16.2 | 29.7 | J |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.3 | 2.02 | 31.7 | |
| 1-Methylnaphthalene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 15 | 79.6 | 8.51 | 31.4 | |
| 2-Methylnaphthalene | 0.84 | 0.30 | 2.000 | 0 | 42.0 | 15 | 78.6 | 11.2 | 30.5 | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 92 | 3.64 | 30.5 | |
| Fluorene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 96 | 6.25 | 25.1 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 21 | 103 | 6.62 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | 3.64 | 14.4 | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 32.8 | 119 | 4.12 | 14.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 84.0 | 34.1 | 110 | 4.65 | 19.2 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 104 | 32 | 132 | 5.61 | 29.3 | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 31.3 | 112 | 5.46 | 19 | |
| Benzo(b)fluoranthene | 1.9 | 0.40 | 2.000 | 0 | 94.0 | 34.1 | 119 | 7.18 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 125 | 24.7 | 152 | 6.95 | 21.3 | |
| Surr: Nitrobenzene-d5 | 76 | | 102.0 | | 74.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 204.0 | | 57.9 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 102.0 | | 64.1 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 102.0 | | 95.1 | 15 | 166 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72443 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72443 | | RunNo: 93750 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384009 | | Units: %Rec | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 45 | | 100.0 | | 44.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 82 | | 200.0 | | 40.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.4 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 82 | | 100.0 | | 82.0 | 15 | 166 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212E57

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: lcs-72443 lf | SampType: LCS | | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | Batch ID: 72443 | | | RunNo: 93750 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3384010 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 61 | | 102.0 | | 59.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 51.6 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 51 | | 102.0 | | 50.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 102.0 | | 83.5 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-----|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: lcsd-72443 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSS02 | Batch ID: 72443 | | | RunNo: 93750 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3384011 | | Units: %Rec | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Nitrobenzene-d5 | 68 | | 102.0 | | 66.5 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 54.2 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 59 | | 102.0 | | 58.0 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 71 | | 102.0 | | 69.9 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-343-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212E57**

Rep#No: **1**

Received By: **Cheyenne Cason** **12/29/2022 7:30:00 AM**

Completed By: **Cheyenne Cason** **12/29/2022 7:55:39 AM**

Reviewed By: **See 12/29/22**

[Signature]

[Signature]

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

16.8
(<2 or >12 unless noted)

Adjusted? **yes**

Checked by: **jm 12/29/22**

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

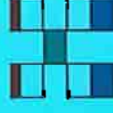
Regarding: _____

Client Instructions: _____

16. Additional remarks: **0.5ml of HNO_3 (7051) was added to sample 0061 for pH 2.2. Jm 12/29/22.**

17. Cooler information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.9 | Good | Not Present | IR Yogi | | |
| 2 | 0.8 | Good | Not Present | IR Yogi | | |
| 3 | 1.1 | Good | Not Present | IR Yogi | | |
| 4 | 0.2 | Good | Not Present | IR Yogi | | |



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. | See Analyte | 8268B VOC | 8270C-SVOC | 8270CSIM: PAH, 1,4 Dioxane | 8015: TPH GRO/DROM/RO | E200.7: Metals | E200.7: Dissolved Metals | E245.1 Mercury | E504.1 EDB | E335.4: Cyanide Subbed | 637.1: PFAS | SM 5201B: BOD | 410.4: COD |
|-------|-------|--------|--------------|----------------------|-------------------|----------|-------------|-----------|------------|----------------------------|-----------------------|----------------|--------------------------|----------------|------------|------------------------|-------------|---------------|------------|
| 12/28 | 8:30 | | EB-12-28-22 | 13 | | 2212E57 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 9:00 | | OW-13 | 13 | | 001 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 9:45 | | OW-56 | 13 | | 002 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 10:16 | | OW-59 | 13 | | 003 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 10:30 | | OW-67 | 13 | | 004 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:00 | | OW-68 | 13 | | 005 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:30 | | OW-60 | 13 | | 006 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:30 | | FB-12-28-22 | 3 | | 007 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:30 | | DUP-12-28-22 | 13 | | 008 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:30 | | Tip Blank | 13 | | 009 | | X | X | X | X | X | X | X | X | X | | | |
| 12/28 | 11:30 | | | | | 010 | | X | X | X | X | X | X | X | X | X | | | |

| Date | Time | Refiniquished by: | Refiniquished by: | Date | Time | Received by: | Date | Time |
|-------|-------|-------------------|-------------------|-------|------|--------------|-------|------|
| 12/28 | 12:30 | Hillman, Tanya | One | 12/28 | 0730 | One | 12/28 | 0730 |
| 12/28 | 12:30 | | | 12/28 | 0730 | | 12/28 | 0730 |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 19, 2023

Emily Conkling
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212F05

Dear Emily Conkling:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/30/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212F05
Date: 1/19/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes regarding e.Coli:

The e.Coli sample was received on Friday 12/30 and the lab was not accepting e.Coli samples on this day due to the New Year holiday.

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B". The laboratory control spike for DRO/MRO had an elevated recovery.

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes regarding EPA Method 8270SIMS:

The 1,4 Dioxane detection for sample MKTF-32 is "E" flagged because the result is above the calibration range.

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:00:00 AM

Lab ID: 2212F05-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 4:42:57 PM | R93719 |
| Surr: BFB | 86.4 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 4:42:57 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 99.4 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Surr: Dibromofluoromethane | 94.1 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 3:38:24 PM | R93747 |
| Surr: Toluene-d8 | 94.2 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 3:38:24 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212F05-001B

Client Sample ID: EB-12-29-22

Collection Date: 12/29/2022 11:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 1/4/2023 1:24:20 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:00:00 AM

Lab ID: 2212F05-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.024 | 0.016 | 0.064 | J | mg/L | 1 | 1/9/2023 2:03:15 PM | 72395 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 2:03:15 PM | 72395 |
| Surr: DNOP | 113 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 2:03:15 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: 2-Fluorophenol | 51.3 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: Phenol-d5 | 40.8 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 58.9 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: Nitrobenzene-d5 | 66.3 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 61.0 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 86.1 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 1:01:57 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 9:01:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:00:00 AM

Lab ID: 2212F05-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.7 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Surr: 2-Fluorobiphenyl | 47.8 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 9:01:00 AM | 72406 |
| Surr: 4-Terphenyl-d14 | 85.4 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 9:01:00 AM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:00:00 AM

Lab ID: 2212F05-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:20:42 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:20:42 PM | 72410 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| Zinc | 0.0065 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:28:52 AM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:07:54 AM | 72410 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:07:54 AM | 72410 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:07:54 AM | 72410 |
| Selenium | 0.00090 | 0.00089 | 0.0010 | J | mg/L | 1 | 1/6/2023 10:07:54 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 12:41:56 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:00:00 AM

Lab ID: 2212F05-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/9/2023 11:58:40 AM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:12:50 PM | B93855 |
| Arsenic | ND | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:12:50 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:12:50 PM | B93855 |
| Selenium | ND | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:12:50 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 12:44:04 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.94 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 5:06:22 PM | R93719 |
| Surr: BFB | 86.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 5:06:22 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | 910 | 10 | 10 | | µg/L | 10 | 1/6/2023 10:53:46 AM | R93792 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 94.1 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 95.8 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Surr: Dibromofluoromethane | 93.4 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 4:05:31 PM | R93747 |
| Surr: Toluene-d8 | 98.8 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 4:05:31 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 1:39:16 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.0 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 2:50:59 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 2:50:59 PM | 72395 |
| Surr: DNOP | 104 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 2:50:59 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: 2-Fluorophenol | 31.9 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: Phenol-d5 | 35.6 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 21.3 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: Nitrobenzene-d5 | 56.2 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 48.2 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 85.7 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 5:11:35 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Anthracene | 0.26 | 0.14 | 0.30 | J | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 5:01:00 PM | R93750 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 51.8 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Surr: 2-Fluorobiphenyl | 41.8 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 5:01:00 PM | R93750 |
| Surr: 4-Terphenyl-d14 | 78.3 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 5:01:00 PM | R93750 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.12 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:22:59 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:22:59 PM | 72410 |
| Nickel | 0.098 | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 10:30:30 AM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:10:21 AM | 72410 |
| Arsenic | 0.00085 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/6/2023 10:10:21 AM | 72410 |
| Lead | 0.00067 | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:10:21 AM | 72410 |
| Selenium | 0.0015 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:10:21 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 12:46:11 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-30

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 11:20:00 AM

Lab ID: 2212F05-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.13 | 0.0056 | 0.010 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Beryllium | 0.0029 | 0.0029 | 0.010 | J | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Nickel | 0.089 | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Vanadium | ND | 0.0086 | 0.25 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 10:25:15 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:18:11 PM | B93855 |
| Arsenic | 0.0011 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:18:11 PM | B93855 |
| Lead | 0.00025 | 0.000099 | 0.00050 | J | mg/L | 1 | 1/10/2023 3:18:11 PM | B93855 |
| Selenium | 0.0065 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:18:11 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 12:48:19 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 57 | 0.45 | 2.5 | | mg/L | 50 | 1/4/2023 6:16:49 PM | R93719 |
| Surr: BFB | 91.6 | 0 | 70-130 | | %Rec | 50 | 1/4/2023 6:16:49 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | 27000 | 500 | 500 | | µg/L | 500 | 1/5/2023 5:26:39 PM | R93747 |
| Toluene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Ethylbenzene | 1100 | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | 650 | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,2,4-Trimethylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Acetone | ND | 500 | 500 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Bromomethane | ND | 150 | 150 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 2-Butanone | ND | 500 | 500 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Carbon disulfide | ND | 500 | 500 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Chlorobenzene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Chloroform | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Chloromethane | ND | 150 | 150 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| cis-1,2-DCE | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,1-Dichloroethane | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,1-Dichloroethene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Isopropylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 4-Isopropyltoluene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Methylene Chloride | ND | 150 | 150 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| n-Butylbenzene | ND | 150 | 150 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| n-Propylbenzene | 58 | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| sec-Butylbenzene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Styrene | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Trichloroethene (TCE) | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Vinyl chloride | ND | 50 | 50 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Xylenes, Total | ND | 75 | 75 | | µg/L | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 0 | 70-130 | | %Rec | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 96.7 | 0 | 70-130 | | %Rec | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Surr: Dibromofluoromethane | 101 | 0 | 70-130 | | %Rec | 50 | 1/5/2023 5:53:43 PM | R93747 |
| Surr: Toluene-d8 | 92.5 | 0 | 70-130 | | %Rec | 50 | 1/5/2023 5:53:43 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 1:54:08 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 3.4 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 3:14:52 PM | 72395 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 3:14:52 PM | 72395 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 3:14:52 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Phenol | 33 | 18 | 20 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: 2-Fluorophenol | 16.6 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: Phenol-d5 | 31.1 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 10.7 | 0 | 15-108 | S | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: Nitrobenzene-d5 | 56.4 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 48.3 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 78.4 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 5:53:02 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.0 | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Naphthalene | 11 | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| 1-Methylnaphthalene | 16 | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Acenaphthene | 0.38 | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Fluorene | 0.58 | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Phenanthrene | 0.34 | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 5:45:00 PM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.1 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 37.0 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 5:45:00 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 71.7 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 5:45:00 PM | 72406 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.0 | 0.0079 | 0.015 | | mg/L | 5 | 1/9/2023 4:29:19 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:26:00 PM | 72410 |
| Nickel | 0.084 | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| Zinc | 0.0066 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:32:11 AM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:20:06 AM | 72410 |
| Arsenic | 0.0023 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:20:06 AM | 72410 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:20:06 AM | 72410 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:20:06 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00039 | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:49:02 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-14

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:00:00 PM

Lab ID: 2212F05-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 2.2 | 0.0056 | 0.010 | * | mg/L | 5 | 1/5/2023 10:31:29 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Nickel | 0.086 | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Vanadium | 0.0019 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/5/2023 10:28:08 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:23:33 PM | B93855 |
| Arsenic | 0.0039 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:23:33 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:23:33 PM | B93855 |
| Selenium | 0.0080 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:23:33 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:51:10 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 6:40:16 PM | R93719 |
| Surr: BFB | 83.6 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 6:40:16 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Acetone | 14 | 10 | 10 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 89.7 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 95.5 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Surr: Dibromofluoromethane | 90.8 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:20:47 PM | R93747 |
| Surr: Toluene-d8 | 93.3 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:20:47 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 1/4/2023 2:09:02 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.65 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 3:38:44 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.76 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 3:38:44 PM | 72395 |
| Surr: DNOP | 73.7 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 3:38:44 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: 2-Fluorophenol | 32.8 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: Phenol-d5 | 25.8 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: 2,4,6-Tribromophenol | 52.8 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: Nitrobenzene-d5 | 37.8 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: 2-Fluorobiphenyl | 29.6 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| Surr: 4-Terphenyl-d14 | 58.8 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 6:34:14 PM | 72406 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 6:29:00 PM | R93750 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 31.0 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Surr: 2-Fluorobiphenyl | 22.2 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 6:29:00 PM | R93750 |
| Surr: 4-Terphenyl-d14 | 46.7 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 6:29:00 PM | R93750 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.020 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:32:17 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:32:17 PM | 72410 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:33:35 AM | 72410 |
| Zinc | 0.028 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 4:32:17 PM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:22:33 AM | 72410 |
| Arsenic | 0.0019 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:22:33 AM | 72410 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:22:33 AM | 72410 |
| Selenium | 0.0024 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:22:33 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:53:19 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: STP-1 to EP-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:15:00 PM

Lab ID: 2212F05-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.017 | 0.0011 | 0.0020 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Silver | 0.0036 | 0.0013 | 0.0050 | J | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Vanadium | 0.0024 | 0.0017 | 0.050 | J | mg/L | 1 | 1/5/2023 10:34:16 PM | C93766 |
| Zinc | 0.028 | 0.0032 | 0.010 | | mg/L | 1 | 1/17/2023 3:23:59 PM | A94009 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0013 | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:28:52 PM | B93855 |
| Arsenic | 0.0021 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:28:52 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:28:52 PM | B93855 |
| Selenium | 0.0022 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:28:52 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:55:28 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212F05-004G

Client Sample ID: STP-1 to EP-2

Collection Date: 12/29/2022 12:15:00 PM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|-----|------|-------|----|---------------------|----------|
| SM5210B: BOD | | | | | | | Analyst: dms | |
| Biochemical Oxygen Demand | 400 | 2.0 | 2.0 | | mg/L | 1 | 1/4/2023 2:46:00 PM | 72380 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 7:03:41 PM | R93719 |
| Surr: BFB | 87.0 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:03:41 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,2-Dichloroethane (EDC) | 1.8 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,1-Dichloroethane | 1.7 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,1-Dichloroethene | 2.5 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 94.0 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 100 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Surr: Dibromofluoromethane | 89.5 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:47:52 PM | R93747 |
| Surr: Toluene-d8 | 93.1 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 6:47:52 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 1/4/2023 2:53:49 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 1.0 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 4:50:14 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.11 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 4:50:14 PM | 72395 |
| Surr: DNOP | 113 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 4:50:14 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: 2-Fluorophenol | 42.7 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: Phenol-d5 | 33.2 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: 2,4,6-Tribromophenol | 71.2 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: Nitrobenzene-d5 | 60.0 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 49.9 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 72.0 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 7:15:28 PM | 72443 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.3 | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 9:24:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 64.6 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 52.5 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 9:24:00 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 81.6 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 9:24:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.079 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:43:27 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:43:27 PM | 72410 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| Zinc | 0.0049 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:42:34 AM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:24:59 AM | 72410 |
| Arsenic | 0.0016 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:24:59 AM | 72410 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:24:59 AM | 72410 |
| Selenium | 0.027 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:24:59 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:57:37 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-41

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:35:00 PM

Lab ID: 2212F05-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.082 | 0.0056 | 0.010 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Beryllium | ND | 0.0029 | 0.010 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Cadmium | ND | 0.0049 | 0.010 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Chromium | ND | 0.0098 | 0.030 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Cobalt | ND | 0.012 | 0.030 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Nickel | ND | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Silver | ND | 0.0063 | 0.025 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Vanadium | 0.016 | 0.0086 | 0.25 | J | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| Zinc | ND | 0.016 | 0.050 | | mg/L | 5 | 1/5/2023 10:42:20 PM | C93766 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:34:12 PM | B93855 |
| Arsenic | ND | 0.0029 | 0.0050 | | mg/L | 5 | 1/11/2023 1:31:40 PM | A93877 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:34:12 PM | B93855 |
| Selenium | 0.035 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:34:12 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 1:59:47 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:50:00 PM

Lab ID: 2212F05-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.76 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 7:27:07 PM | R93719 |
| Surr: BFB | 88.1 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:27:07 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | 740 | 10 | 10 | | µg/L | 10 | 1/6/2023 11:20:58 AM | R93792 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 1,2-Dichloroethane (EDC) | 7.3 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| cis-1,2-DCE | 2.1 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 1,1-Dichloroethane | 6.9 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 1,1-Dichloroethene | 16 | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 95.8 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Surr: Dibromofluoromethane | 92.7 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 7:14:55 PM | R93747 |
| Surr: Toluene-d8 | 91.0 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 7:14:55 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212F05-006B

Client Sample ID: MKTF-32

Collection Date: 12/29/2022 12:50:00 PM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 1/4/2023 3:08:41 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:50:00 PM

Lab ID: 2212F05-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.19 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 5:14:03 PM | 72395 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 5:14:03 PM | 72395 |
| Surr: DNOP | 120 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 5:14:03 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: 2-Fluorophenol | 103 | 0 | 15-84.5 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: Phenol-d5 | 71.9 | 0 | 15-67 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: 2,4,6-Tribromophenol | 151 | 0 | 15-108 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: Nitrobenzene-d5 | 116 | 0 | 16.8-112 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 106 | 0 | 15-101 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 142 | 0 | 34.4-134 | S | %Rec | 1 | 1/10/2023 7:56:30 PM | 72443 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 34 | 0.11 | 1.0 | E | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 10:07:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-32**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/29/2022 12:50:00 PM**Lab ID:** 2212F05-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 113 | 0 | 15-108 | S | %Rec | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 95.7 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 10:07:00 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 163 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 10:07:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:50:00 PM

Lab ID: 2212F05-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.11 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:46:38 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:46:38 PM | 72410 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 1/9/2023 10:44:11 AM | 72410 |
| Zinc | 0.012 | 0.0039 | 0.010 | | mg/L | 1 | 1/9/2023 4:46:38 PM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:27:26 AM | 72410 |
| Arsenic | 0.0033 | 0.00022 | 0.0010 | | mg/L | 1 | 1/6/2023 10:27:26 AM | 72410 |
| Lead | 0.0030 | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:27:26 AM | 72410 |
| Selenium | 0.0020 | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:27:26 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 2:01:57 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-32

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:50:00 PM

Lab ID: 2212F05-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.0039 | 0.0011 | 0.0020 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/9/2023 12:03:12 PM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:39:33 PM | B93855 |
| Arsenic | 0.0030 | 0.00057 | 0.0010 | | mg/L | 1 | 1/10/2023 3:39:33 PM | B93855 |
| Lead | ND | 0.000099 | 0.00050 | | mg/L | 1 | 1/10/2023 3:39:33 PM | B93855 |
| Selenium | 0.0044 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:39:33 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 2:04:05 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022 12:50:00 PM

Lab ID: 2212F05-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 1 | 1/6/2023 11:48:10 AM | R93792 |
| Surr: Toluene-d8 | 98.9 | 0 | 70-130 | | %Rec | 1 | 1/6/2023 11:48:10 AM | R93792 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.99 | 0.0090 | 0.050 | | mg/L | 1 | 1/4/2023 7:50:32 PM | R93719 |
| Surr: BFB | 85.7 | 0 | 70-130 | | %Rec | 1 | 1/4/2023 7:50:32 PM | R93719 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: RAA | |
| Benzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Toluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Ethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Methyl tert-butyl ether (MTBE) | 1000 | 10 | 10 | | µg/L | 10 | 1/6/2023 12:15:25 PM | R93792 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Acetone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Bromomethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 2-Butanone | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Carbon disulfide | ND | 10 | 10 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Chlorobenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Chloroform | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Chloromethane | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| cis-1,2-DCE | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 1,1-Dichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 1,1-Dichloroethene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Isopropylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 4-Isopropyltoluene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Methylene Chloride | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| n-Butylbenzene | ND | 3.0 | 3.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| n-Propylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| sec-Butylbenzene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Styrene | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Tetrachloroethene (PCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| 1,1,1-Trichloroethane | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Trichloroethene (TCE) | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Vinyl chloride | ND | 1.0 | 1.0 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Xylenes, Total | ND | 1.5 | 1.5 | | µg/L | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Surr: 1,2-Dichloroethane-d4 | 99.3 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Surr: 4-Bromofluorobenzene | 103 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Surr: Dibromofluoromethane | 99.9 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 8:09:02 PM | R93747 |
| Surr: Toluene-d8 | 92.2 | 0 | 70-130 | | %Rec | 1 | 1/5/2023 8:09:02 PM | R93747 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|---------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 1/4/2023 3:38:27 PM | 72430 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.4 | 0.016 | 0.064 | BE | mg/L | 1 | 1/9/2023 5:37:47 PM | 72395 |
| Motor Oil Range Organics (MRO) | 0.13 | 0.052 | 0.080 | | mg/L | 1 | 1/9/2023 5:37:47 PM | 72395 |
| Surr: DNOP | 107 | 0 | 15.9-177 | | %Rec | 1 | 1/9/2023 5:37:47 PM | 72395 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: 2-Fluorophenol | 44.7 | 0 | 15-84.5 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: Phenol-d5 | 37.2 | 0 | 15-67 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: 2,4,6-Tribromophenol | 66.8 | 0 | 15-108 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: Nitrobenzene-d5 | 59.6 | 0 | 16.8-112 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 15-101 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 79.2 | 0 | 34.4-134 | | %Rec | 1 | 1/10/2023 8:38:09 PM | 72443 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 1/5/2023 10:51:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.7 | 0 | 15-108 | | %Rec | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Surr: 2-Fluorobiphenyl | 50.4 | 0 | 15-107 | | %Rec | 1 | 1/5/2023 10:51:00 PM | 72443 |
| Surr: 4-Terphenyl-d14 | 78.5 | 0 | 15-166 | | %Rec | 1 | 1/5/2023 10:51:00 PM | 72443 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.13 | 0.0016 | 0.0030 | | mg/L | 1 | 1/9/2023 4:49:39 PM | 72410 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 1/9/2023 4:49:39 PM | 72410 |
| Nickel | 0.10 | 0.0053 | 0.010 | * | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| Zinc | 0.0074 | 0.0039 | 0.010 | J | mg/L | 1 | 1/9/2023 10:45:36 AM | 72410 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 1/6/2023 10:29:52 AM | 72410 |
| Arsenic | 0.00063 | 0.00022 | 0.0010 | J | mg/L | 1 | 1/6/2023 10:29:52 AM | 72410 |
| Lead | 0.00078 | 0.00019 | 0.00050 | | mg/L | 1 | 1/6/2023 10:29:52 AM | 72410 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 1/6/2023 10:29:52 AM | 72410 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 2:06:13 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212F05

Date Reported: 1/19/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Dup-12-29-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/29/2022

Lab ID: 2212F05-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: JRR | |
| Barium | 0.012 | 0.0011 | 0.0020 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Nickel | 0.0070 | 0.0033 | 0.010 | J | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 1/9/2023 12:16:34 PM | A93838 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00045 | 0.0010 | | mg/L | 1 | 1/10/2023 3:44:54 PM | B93855 |
| Arsenic | 0.00094 | 0.00057 | 0.0010 | J | mg/L | 1 | 1/10/2023 3:44:54 PM | B93855 |
| Lead | 0.00031 | 0.000099 | 0.00050 | J | mg/L | 1 | 1/10/2023 3:44:54 PM | B93855 |
| Selenium | 0.0057 | 0.00056 | 0.0010 | | mg/L | 1 | 1/10/2023 3:44:54 PM | B93855 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 1/18/2023 2:08:20 PM | 72676 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



ANALYTICAL REPORT

January 06, 2023

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1572595

Samples Received: 01/04/2023

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
|---|----|---------------------------|
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2212F05-001F EB-12-29-22 L1572595-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 11:00 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:00 | LDT | Mt. Juliet, TN |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2212F05-002F OW-30 L1572595-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 11:20 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:01 | LDT | Mt. Juliet, TN |

2212F05-003F OW-14 L1572595-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 12:00 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:02 | LDT | Mt. Juliet, TN |

2212F05-004FH STP-1 TO EP-2 L1572595-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 12:15 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 410.4 | WG1983632 | 1 | 01/05/23 14:50 | 01/05/23 17:34 | EPW | Mt. Juliet, TN |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:05 | LDT | Mt. Juliet, TN |

2212F05-005F MKTF-41 L1572595-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 12:35 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:06 | LDT | Mt. Juliet, TN |

2212F05-006F MKTF-32 L1572595-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 12:50 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:07 | LDT | Mt. Juliet, TN |

2212F05-008F DUP-12-29-22 L1572595-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | Collected by | Collected date/time | Received date/time |
| | | | | | 12/29/22 00:00 | 01/04/23 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1982605 | 1 | 01/05/23 17:02 | 01/05/23 23:08 | LDT | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/05/2023 23:00 | WG1982605 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00727 | | 0.00500 | 1 | 01/05/2023 23:01 | WG1982605 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/29/22 12:00

L1572595

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/05/2023 23:02 | WG1982605 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 12/29/22 12:15

L1572595

Wet Chemistry by Method 410.4

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|------|----------|----------------------|---------------------------|
| COD | 152 | | 20.0 | 1 | 01/05/2023 17:34 | WG1983632 |

¹ Cp

² Tc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/05/2023 23:05 | WG1982605 |

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/05/2023 23:06 | WG1982605 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 01/05/2023 23:07 | WG1982605 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0155 | | 0.00500 | 1 | 01/05/2023 23:08 | WG1982605 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3878432-1 01/05/23 17:19

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| COD | U | | 11.7 | 20.0 |

L1572565-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1572565-01 01/05/23 17:24 • (DUP) R3878432-3 01/05/23 17:25

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| COD | ND | ND | 1 | 0.000 | 20 |

L1572755-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1572755-01 01/05/23 17:35 • (DUP) R3878432-6 01/05/23 17:36

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|------------------------|
| COD | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3878432-2 01/05/23 17:20

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| COD | 500 | 461 | 92.3 | 90.0-110 | |

L1572565-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1572565-01 01/05/23 17:24 • (MS) R3878432-4 01/05/23 17:29 • (MSD) R3878432-5 01/05/23 17:29

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| COD | 500 | ND | 499 | 606 | 99.8 | 121 | 1 | 80.0-120 | | J5 | 19.3 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3878787-1 01/05/23 22:40

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1572133-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1572133-01 01/05/23 22:44 • (DUP) R3878787-3 01/05/23 22:45

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

L1572593-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1572593-01 01/05/23 22:58 • (DUP) R3878787-6 01/05/23 22:59

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP RPD
Limits |
|---------|-------------------------|--------------------|----------|--------------|-------------------|
| Cyanide | ND | ND | 1 | 0.000 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3878787-2 01/05/23 22:41

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0931 | 93.1 | 87.1-120 | |

L1572230-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1572230-01 01/05/23 22:46 • (MS) R3878787-4 01/05/23 22:47 • (MSD) R3878787-5 01/05/23 22:48

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|------------|
| Cyanide | 0.100 | ND | 0.100 | 0.0987 | 100 | 98.7 | 1 | 90.0-110 | | | 1.31 | 20 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|--|
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |
|----|--|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

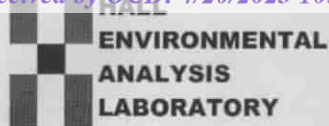
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107

Website: www.hallenvironmental.com

H134

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|--|--------------|------------------|-------------|-----------------------|------------------------|---------------------|-----------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2212F05-001F | EB-12-29-22 | 500AMBHDP | Groundw | 12/29/2022 11:00:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212F05-002F | OW-30 | 500AMBHDP | Groundw | 12/29/2022 11:20:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212F05-003F | OW-14 | 500AMBHDP | Groundw | 12/29/2022 12:00:00 PM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212F05-004F | STP-1 to EP-2 | 500AMBHDP | Groundw | 12/29/2022 12:15:00 PM | 1 | Total Cyanide J and MDL J04 |
| 5 | 2212F05-004H | STP-1 to EP-2 | 500HDPH2 | Groundw | 12/29/2022 12:15:00 PM | 1 | COD -09 |
| 6 | 2212F05-005F | MKTF-41 | 500AMBHDP | Groundw | 12/29/2022 12:35:00 PM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2212F05-006F | MKTF-32 | 500AMBHDP | Groundw | 12/29/2022 12:50:00 PM | 1 | Total Cyanide J and MDL -07 |
| 8 | 2212F05-008F | Dup-12-29-22 | 500AMBHDP | Groundw | 12/29/2022 | 1 | Total Cyanide J and MDL |

7709 3257 8240

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N IF Applicable

COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N

Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N

Correct bottles used: ☒ Y ☐ N

Sufficient volume sent: ☒ Y ☐ N

RAD Screen <0.5 mR/hr: ☒ Y ☐ N

GBRZ 5.0

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|------------------|---------------|--------------------------------|--------------|-------------|--|--|
| Relinquished By: <i>CMC</i> | Date: 12/30/2022 | Time: 9:08 AM | Received By: | Date: | Time: | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: <i>Caleb Tapp</i> | Date: 1/4/23 | Time: 09:00 | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72410 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72410 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386102 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72410 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72410 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386103 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0029 | 0.0030 | 0.002000 | 0 | 145 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0018 | 0.0020 | 0.002000 | 0 | 91.0 | 50 | 150 | | | J |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Cobalt | 0.0075 | 0.0060 | 0.006000 | 0 | 126 | 50 | 150 | | | |
| Nickel | 0.0057 | 0.010 | 0.005000 | 0 | 114 | 50 | 150 | | | J |
| Silver | 0.0054 | 0.0050 | 0.005000 | 0 | 108 | 50 | 150 | | | |
| Vanadium | 0.011 | 0.050 | 0.01000 | 0 | 110 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|--------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72410 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72410 | RunNo: 93794 | | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386104 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Beryllium | 0.55 | 0.0020 | 0.5000 | 0 | 110 | 85 | 115 | | | |
| Cadmium | 0.54 | 0.0020 | 0.5000 | 0 | 108 | 85 | 115 | | | |
| Chromium | 0.53 | 0.0060 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.54 | 0.050 | 0.5000 | 0 | 109 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72410 | SampType: MBLK | TestCode: EPA Method 200.7: Metals |
| Client ID: PBW | Batch ID: 72410 | RunNo: 93812 |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386596 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | ND | 0.0030 |
| Cobalt | ND | 0.0060 |
| Zinc | ND | 0.010 |

| | | |
|-------------------------------|--------------------------------|--|
| Sample ID: LCSLL-72410 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals |
| Client ID: BatchQC | Batch ID: 72410 | RunNo: 93812 |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386597 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.0021 | 0.0030 0.002000 0 104 50 150 J |
| Cobalt | 0.0061 | 0.0060 0.006000 0 101 50 150 |
| Zinc | 0.010 | 0.010 0.01000 0 101 50 150 |

| | | |
|-----------------------------|--------------------------------|--|
| Sample ID: LCS-72410 | SampType: LCS | TestCode: EPA Method 200.7: Metals |
| Client ID: LCSW | Batch ID: 72410 | RunNo: 93812 |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | SeqNo: 3386598 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.46 | 0.0030 0.5000 0 92.3 85 115 |
| Cobalt | 0.45 | 0.0060 0.5000 0 90.4 85 115 |
| Zinc | 0.45 | 0.010 0.5000 0 90.7 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385002 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LLCS-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385003 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.3 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 96.7 | 50 | 150 | | | J |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.9 | 50 | 150 | | | J |
| Chromium | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Cobalt | 0.0062 | 0.0060 | 0.006000 | 0 | 103 | 50 | 150 | | | |
| Nickel | 0.0049 | 0.010 | 0.005000 | 0 | 97.3 | 50 | 150 | | | J |
| Silver | 0.0048 | 0.0050 | 0.005000 | 0 | 96.5 | 50 | 150 | | | J |
| Vanadium | 0.0098 | 0.050 | 0.01000 | 0 | 98.2 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 110 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C93766 | RunNo: 93766 | | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | SeqNo: 3385007 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.0 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387404 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387405 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 90.6 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 102 | 50 | 150 | | | |
| Cadmium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.5 | 50 | 150 | | | J |
| Chromium | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Cobalt | 0.0060 | 0.0060 | 0.006000 | 0 | 101 | 50 | 150 | | | |
| Nickel | 0.0039 | 0.010 | 0.005000 | 0 | 78.6 | 50 | 150 | | | J |
| Silver | 0.0053 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.0096 | 0.050 | 0.01000 | 0 | 96.2 | 50 | 150 | | | J |
| Zinc | 0.011 | 0.010 | 0.01000 | 0 | 112 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93838 | RunNo: 93838 | | | | | | | | |
| Prep Date: | Analysis Date: 1/9/2023 | SeqNo: 3387406 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.49 | 0.0020 | 0.5000 | 0 | 97.5 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.1 | 85 | 115 | | | |
| Cobalt | 0.47 | 0.0060 | 0.5000 | 0 | 93.9 | 85 | 115 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.5 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 100 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.2 | 85 | 115 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-A | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A94009 | | RunNo: 94009 | | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | | SeqNo: 3393889 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-A | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A94009 | | RunNo: 94009 | | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | | SeqNo: 3393890 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 115 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-A | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A94009 | | RunNo: 94009 | | | | | | | |
| Prep Date: | Analysis Date: 1/17/2023 | | SeqNo: 3393891 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72410 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 72410 | RunNo: 93754 |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384112 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |

| | | |
|---------------------------------|--------------------------------|--|
| Sample ID: MSLCSLL-72410 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 72410 | RunNo: 93754 |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384113 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0012 | 0.0010 0.001000 0 115 50 150 |
| Arsenic | 0.0012 | 0.0010 0.001000 0 117 50 150 |
| Lead | 0.00051 | 0.00050 0.0005000 0 103 50 150 |

| | | |
|-------------------------------|--------------------------------|--|
| Sample ID: MSLCS-72410 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 72410 | RunNo: 93754 |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | SeqNo: 3384114 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.025 | 0.0010 0.02500 0 98.1 85 115 |
| Arsenic | 0.025 | 0.0010 0.02500 0 100 85 115 |
| Lead | 0.013 | 0.00050 0.01250 0 100 85 115 |

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72410 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 72410 | RunNo: 93790 |
| Prep Date: 1/3/2023 | Analysis Date: 1/6/2023 | SeqNo: 3385879 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|---------------------------------|--------------------------------|--|
| Sample ID: MSLCSLL-72410 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 72410 | RunNo: 93790 |
| Prep Date: 1/3/2023 | Analysis Date: 1/6/2023 | SeqNo: 3385880 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0013 | 0.0010 0.001000 0 130 50 150 |
| Arsenic | 0.00099 | 0.0010 0.001000 0 99.2 50 150 J |
| Lead | 0.00046 | 0.00050 0.0005000 0 91.6 50 150 J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|---------|--------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-72410 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 72410 | | | RunNo: 93790 | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/6/2023 | | | SeqNo: 3385880 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.00084 | 0.0010 | 0.001000 | 0 | 84.0 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|--------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-72410 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 72410 | | | RunNo: 93790 | | | | | |
| Prep Date: 1/3/2023 | | Analysis Date: 1/6/2023 | | | SeqNo: 3385881 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.7 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 96.7 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387953 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS A | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387954 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387955 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 117 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|---------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B93855 | | RunNo: 93855 | | | | | | | |
| Prep Date: | Analysis Date: 1/10/2023 | | SeqNo: 3387956 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|---------------------------------|-----|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93877 | | RunNo: 93877 | | | | | | | |
| Prep Date: | Analysis Date: 1/11/2023 | | SeqNo: 3388811 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------|---------------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: A93877 | RunNo: 93877 |
| Prep Date: | Analysis Date: 1/11/2023 | SeqNo: 3388811 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | ND | 0.0010 |

| | | |
|---------------------------|---------------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: A93877 | RunNo: 93877 |
| Prep Date: | Analysis Date: 1/11/2023 | SeqNo: 3388813 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.0012 | 0.0010 0.001000 0 123 50 150 |

| | | |
|------------------------|---------------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: A93877 | RunNo: 93877 |
| Prep Date: | Analysis Date: 1/11/2023 | SeqNo: 3388814 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.025 | 0.0010 0.02500 0 100 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-72676 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72676 | RunNo: 94031 |
| Prep Date: 1/18/2023 | Analysis Date: 1/18/2023 | SeqNo: 3394539 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|---------------------------------|--|
| Sample ID: LCSLL-72676 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72676 | RunNo: 94031 |
| Prep Date: 1/18/2023 | Analysis Date: 1/18/2023 | SeqNo: 3394540 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00017 0.00020 0.0001500 | 0 115 50 150 J |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-72676 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72676 | RunNo: 94031 |
| Prep Date: 1/18/2023 | Analysis Date: 1/18/2023 | SeqNo: 3394541 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 0.00020 0.005000 | 0 106 85 115 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72430 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385211 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|--------------------------------|--|
| Sample ID: LCS-72430 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385212 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.13 | 0.010 0.1000 0 129 70 130 |

| | | |
|----------------------------------|--------------------------------|--|
| Sample ID: 2212F05-004BMS | SampType: MS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: STP-1 to EP-2 | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385213 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.0094 0.09358 0 112 65 135 |

| | | |
|-----------------------------------|--------------------------------|--|
| Sample ID: 2212F05-004BMSD | SampType: MSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: STP-1 to EP-2 | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385214 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.088 | 0.0093 0.09259 0 94.8 65 135 18.0 20 |

| | | |
|----------------------------|--------------------------------|--|
| Sample ID: MB-72430 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72430 | RunNo: 93769 |
| Prep Date: 1/4/2023 | Analysis Date: 1/4/2023 | SeqNo: 3385242 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72395 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 72395 | RunNo: 93843 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3387577 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.10 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.034 | | 0.03750 | | 91.0 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72395 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 72395 | RunNo: 93843 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3387578 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.26 | 0.064 | 0.1875 | 0 | 138 | 31.2 | 125 | | | BS |
| Surr: DNOP | 0.020 | | 0.01875 | | 109 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|--------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72395 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72395 | RunNo: 93843 | | | | | | | | |
| Prep Date: 12/30/2022 | Analysis Date: 1/9/2023 | SeqNo: 3387579 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.20 | 0.064 | 0.1875 | 0 | 108 | 31.2 | 125 | 25.2 | 20 | BR |
| Surr: DNOP | 0.019 | | 0.01875 | | 104 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

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D Sample Diluted Due to Matrix
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PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93719 | | RunNo: 93719 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382914 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.46 | 0.050 | 0.5000 | 0 | 91.4 | 80 | 120 | | | |
| Surr: BFB | 36 | | 20.00 | | 178 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212f05-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-30 | Batch ID: R93719 | | RunNo: 93719 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382917 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 1.4 | 0.050 | 0.5000 | 0.9360 | 99.3 | 70 | 130 | | | |
| Surr: BFB | 36 | | 20.00 | | 179 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2212f05-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: OW-30 | Batch ID: R93719 | | RunNo: 93719 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382918 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 1.4 | 0.050 | 0.5000 | 0.9360 | 98.5 | 70 | 130 | 0.280 | 20 | |
| Surr: BFB | 36 | | 20.00 | | 182 | 70 | 130 | 0 | 0 | S |

| | | | | | | | | | | |
|-------------------------------|--------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93719 | | RunNo: 93719 | | | | | | | |
| Prep Date: | Analysis Date: 1/4/2023 | | SeqNo: 3382926 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 17 | | 20.00 | | 87.2 | 70 | 130 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93747 | | RunNo: 93747 | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | | SeqNo: 3383858 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.4 | 70 | 130 | | | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 94.2 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 90.8 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 91.9 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 90.6 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212f05-002a ms | SampType: MS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-30 | Batch ID: R93747 | | RunNo: 93747 | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | | SeqNo: 3383862 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 97.8 | 70 | 130 | | | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 94.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 94.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 93.5 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Sample ID: 2212f05-002a msd | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: OW-30 | Batch ID: R93747 | | RunNo: 93747 | | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | | SeqNo: 3383863 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 18 | 1.0 | 20.00 | 0 | 91.5 | 70 | 130 | 11.0 | 20 | |
| Toluene | 19 | 1.0 | 20.00 | 0 | 95.5 | 70 | 130 | 2.40 | 20 | |
| Chlorobenzene | 19 | 1.0 | 20.00 | 0 | 94.0 | 70 | 130 | 0.883 | 20 | |
| 1,1-Dichloroethene | 17 | 1.0 | 20.00 | 0 | 83.7 | 70 | 130 | 11.7 | 20 | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 89.2 | 70 | 130 | 4.67 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 108 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.2 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.7 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.3 | | 10.00 | | 93.2 | 70 | 130 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93747 | | | RunNo: 93747 | | | | | | |
| Prep Date: | Analysis Date: 1/5/2023 | | | SeqNo: 3383879 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.4 | | 10.00 | | 93.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 94.3 | 70 | 130 | | | |

| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93792 | | | RunNo: 93792 | | | | | | |
| Prep Date: | Analysis Date: 1/6/2023 | | | SeqNo: 3386041 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: R93792 | | | RunNo: 93792 | | | | | | |
| Prep Date: | Analysis Date: 1/6/2023 | | | SeqNo: 3386041 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 20 | 1.0 | 20.00 | 0 | 99.7 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 88.4 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 88.0 | 70 | 130 | | | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 89.2 | 70 | 130 | | | |
| Trichloroethene (TCE) | 18 | 1.0 | 20.00 | 0 | 88.9 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 96.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.5 | | 10.00 | | 95.2 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.9 | | 10.00 | | 89.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R93792 | | | RunNo: 93792 | | | | | | |
| Prep Date: | Analysis Date: 1/6/2023 | | | SeqNo: 3386075 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93792 | | | RunNo: 93792 | | | | | | |
| Prep Date: | Analysis Date: 1/6/2023 | | | SeqNo: 3386075 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 96.2 | 70 | 130 | | | |
| Surr: Toluene-d8 | 8.8 | | 10.00 | | 87.6 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72406 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72406 | | | RunNo: 93814 | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | | SeqNo: 3386698 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 87 | | 200.0 | | 43.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 70 | | 200.0 | | 35.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 120 | | 200.0 | | 58.8 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 55 | | 100.0 | | 55.3 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 46 | | 100.0 | | 45.9 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.6 | 34.4 | 134 | | | |

| Sample ID: lcs-72406 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|--------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | | | RunNo: 93814 | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | | SeqNo: 3386699 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon
Project: 2022 GW Sampling 4th Quarter

| Sample ID: lcs-72406 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|-----------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386699 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 60 | 10 | 100.0 | 0 | 60.0 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 41 | 5.0 | 100.0 | 0 | 40.6 | 15 | 89.8 | | | |
| Phenol | 83 | 20 | 200.0 | 0 | 41.7 | 17 | 61.1 | | | |
| Pyrene | 75 | 10 | 100.0 | 0 | 74.6 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 94 | | 200.0 | | 46.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 37.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 70.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 64.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.3 | 34.4 | 134 | | | |

| Sample ID: lcsd-72406 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|------------------------------|--------------------------------|-----|--|-------------|--------------------|----------|-----------|-------|----------|------|
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93814 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/9/2023 | | SeqNo: 3386700 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 52 | 10 | 100.0 | 0 | 52.3 | 21.3 | 104 | 13.7 | 45.3 | |
| 1,4-Dichlorobenzene | 39 | 5.0 | 100.0 | 0 | 39.1 | 15 | 89.8 | 3.61 | 39.6 | |
| Phenol | 77 | 20 | 200.0 | 0 | 38.4 | 17 | 61.1 | 8.35 | 42.5 | |
| Pyrene | 74 | 10 | 100.0 | 0 | 74.2 | 61 | 123 | 0.549 | 11.8 | |
| Surr: 2-Fluorophenol | 91 | | 200.0 | | 45.4 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 72 | | 200.0 | | 35.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 72.1 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 58 | | 100.0 | | 58.4 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 49.1 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 86 | | 100.0 | | 86.2 | 34.4 | 134 | 0 | 0 | |

| Sample ID: mb-72443 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
|----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72443 | | RunNo: 93858 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | SeqNo: 3388040 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72443 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72443 | | | RunNo: 93858 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | | SeqNo: 3388040 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 59 | | 200.0 | | 29.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 46 | | 200.0 | | 23.0 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.3 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.0 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 34 | | 100.0 | | 34.0 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 61 | | 100.0 | | 61.2 | 34.4 | 134 | | | |

| Sample ID: lcs-72443 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|---------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72443 | | | RunNo: 93858 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | | | SeqNo: 3388041 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 64 | 10 | 100.0 | 0 | 63.9 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 42 | 5.0 | 100.0 | 0 | 42.1 | 15 | 89.8 | | | |
| Phenol | 88 | 20 | 200.0 | 0 | 44.0 | 17 | 61.1 | | | |
| Pyrene | 89 | 10 | 100.0 | 0 | 88.5 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 52.3 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 80 | | 200.0 | | 39.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 85.2 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 100.0 | | 67.3 | 16.8 | 112 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcs-72443 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSW | Batch ID: 72443 | RunNo: 93858 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | SeqNo: 3388041 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 59 | | 100.0 | | 58.6 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 99 | | 100.0 | | 98.6 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|---------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72443 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72443 | RunNo: 93858 | | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/10/2023 | SeqNo: 3388042 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 65 | 10 | 100.0 | 0 | 64.9 | 21.3 | 104 | 1.57 | 45.3 | |
| 1,4-Dichlorobenzene | 43 | 5.0 | 100.0 | 0 | 43.0 | 15 | 89.8 | 2.27 | 39.6 | |
| Phenol | 90 | 20 | 200.0 | 0 | 45.2 | 17 | 61.1 | 2.74 | 42.5 | |
| Pyrene | 96 | 10 | 100.0 | 0 | 95.7 | 61 | 123 | 7.73 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 54.2 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 84 | | 200.0 | | 42.1 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 190 | | 200.0 | | 93.6 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 71 | | 100.0 | | 70.8 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 62 | | 100.0 | | 62.5 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 107 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72406 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383328 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 54 | | 100.0 | | 54.1 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 49.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 45 | | 100.0 | | 45.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 103 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72406-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383329 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.68 | 1.0 | 2.000 | 0 | 34.0 | 15 | 60.5 | | | J |
| Naphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 0.94 | 0.30 | 2.000 | 0 | 47.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 54.0 | 15 | 92 | | | |
| Fluorene | 1.2 | 0.30 | 2.000 | 0 | 62.0 | 15 | 96 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21 | 103 | | | |
| Anthracene | 1.6 | 0.30 | 2.000 | 0 | 81.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 88.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.2 | 0.30 | 2.000 | 0 | 110 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 101 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.7 | 0.30 | 2.000 | 0 | 134 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 67 | | 102.0 | | 65.7 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72406-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383329 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 55.4 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 102.0 | | 56.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 102.0 | | 100 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72406-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72406 | | RunNo: 93725 | | | | | | | |
| Prep Date: 1/3/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3383330 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.80 | 1.0 | 2.000 | 0 | 40.0 | 15 | 60.5 | 16.2 | 29.7 | J |
| Naphthalene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 78.3 | 2.02 | 31.7 | |
| 1-Methylnaphthalene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 15 | 79.6 | 8.51 | 31.4 | |
| 2-Methylnaphthalene | 0.84 | 0.30 | 2.000 | 0 | 42.0 | 15 | 78.6 | 11.2 | 30.5 | |
| Acenaphthene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 92 | 3.64 | 30.5 | |
| Fluorene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 96 | 6.25 | 25.1 | |
| Phenanthrene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 21 | 103 | 6.62 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | 3.64 | 14.4 | |
| Fluoranthene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 32.8 | 119 | 4.12 | 14.8 | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 84.0 | 34.1 | 110 | 4.65 | 19.2 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 104 | 32 | 132 | 5.61 | 29.3 | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 31.3 | 112 | 5.46 | 19 | |
| Benzo(b)fluoranthene | 1.9 | 0.40 | 2.000 | 0 | 94.0 | 34.1 | 119 | 7.18 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 125 | 24.7 | 152 | 6.95 | 21.3 | |
| Surr: Nitrobenzene-d5 | 76 | | 102.0 | | 74.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 120 | | 204.0 | | 57.9 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 65 | | 102.0 | | 64.1 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 97 | | 102.0 | | 95.1 | 15 | 166 | 0 | 0 | |

| | | | | | | | | | | |
|----------------------------|--------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72443 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72443 | | RunNo: 93750 | | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | SeqNo: 3384009 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|--------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: mb-72443 | | SampType: MBLK | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: PBW | | Batch ID: 72443 | | | RunNo: 93750 | | | | | |
| Prep Date: 1/4/2023 | | Analysis Date: 1/5/2023 | | | SeqNo: 3384009 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 45 | | 100.0 | | 44.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 82 | | 200.0 | | 40.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.4 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 82 | | 100.0 | | 82.0 | 15 | 166 | | | |

| Sample ID: lcs-72443 If | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|--------------------------------|-------------------------------------|-----------|-----------------------|------|----------|--------------------|------|----------|------|
| Client ID: LCSW | Batch ID: 72443 | | | RunNo: 93750 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3384010 | | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.54 | 0.30 | 2.000 | 0 | 27.0 | 15 | 60.5 | | | |
| Naphthalene | 0.50 | 0.30 | 2.000 | 0 | 25.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 0.44 | 0.30 | 2.000 | 0 | 22.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 0.40 | 0.30 | 2.000 | 0 | 20.0 | 15 | 78.6 | | | |
| Acenaphthene | 0.48 | 0.30 | 2.000 | 0 | 24.0 | 15 | 92 | | | |
| Fluorene | 0.68 | 0.30 | 2.000 | 0 | 34.0 | 15 | 96 | | | |
| Phenanthrene | 0.98 | 0.30 | 2.000 | 0 | 49.0 | 21 | 103 | | | |
| Anthracene | 1.2 | 0.30 | 2.000 | 0 | 60.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 80.0 | 32.8 | 119 | | | |
| Pyrene | 1.4 | 1.0 | 2.000 | 0 | 69.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 32 | 132 | | | |
| Chrysene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 83.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.3 | 0.30 | 2.000 | 0 | 117 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 61 | | 102.0 | | 59.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 51.6 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 51 | | 102.0 | | 50.1 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 85 | | 102.0 | | 83.5 | 15 | 166 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: lcsd-72443 lf | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 72443 | | | RunNo: 93750 | | | | | | |
| Prep Date: 1/4/2023 | Analysis Date: 1/5/2023 | | | SeqNo: 3384011 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.64 | 0.30 | 2.000 | 0 | 32.0 | 15 | 60.5 | 16.9 | 29.7 | |
| Naphthalene | 0.96 | 0.30 | 2.000 | 0 | 48.0 | 15 | 78.3 | 63.0 | 31.7 | R |
| 1-Methylnaphthalene | 0.92 | 0.30 | 2.000 | 0 | 46.0 | 15 | 79.6 | 70.6 | 31.4 | R |
| 2-Methylnaphthalene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 15 | 78.6 | 76.9 | 30.5 | R |
| Acenaphthene | 1.0 | 0.30 | 2.000 | 0 | 50.0 | 15 | 92 | 70.3 | 30.5 | R |
| Fluorene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 96 | 50.5 | 25.1 | R |
| Phenanthrene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 21 | 103 | 28.1 | 26.4 | R |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 73.0 | 21.1 | 106 | 19.5 | 14.4 | R |
| Fluoranthene | 1.7 | 0.30 | 2.000 | 0 | 87.0 | 32.8 | 119 | 8.38 | 14.8 | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 76.0 | 34.1 | 110 | 9.66 | 19.2 | |
| Benz(a)anthracene | 2.0 | 0.30 | 2.000 | 0 | 98.0 | 32 | 132 | 7.41 | 29.3 | |
| Chrysene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 31.3 | 112 | 10.3 | 19 | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 89.0 | 34.1 | 119 | 6.98 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.4 | 0.30 | 2.000 | 0 | 122 | 24.7 | 152 | 4.18 | 21.3 | |
| Surr: Nitrobenzene-d5 | 68 | | 102.0 | | 66.5 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 110 | | 204.0 | | 54.2 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 59 | | 102.0 | | 58.0 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 71 | | 102.0 | | 69.9 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212F05

19-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|--------------------------------|--|
| Sample ID: MB-72380 | SampType: MBLK | TestCode: SM5210B: BOD |
| Client ID: PBW | Batch ID: 72380 | RunNo: 93723 |
| Prep Date: 12/30/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383152 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | ND | 2.0 |

| | | |
|------------------------------|--------------------------------|--|
| Sample ID: LCS-72380 | SampType: LCS | TestCode: SM5210B: BOD |
| Client ID: LCSW | Batch ID: 72380 | RunNo: 93723 |
| Prep Date: 12/30/2022 | Analysis Date: 1/4/2023 | SeqNo: 3383153 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Biochemical Oxygen Demand | 137 | 2.0 198.0 0 69.2 84.6 115.4 S |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212F05**

ReplNo: 1

Received By: **Cheyenne Cason** 12/30/2022 7:30:00 AM

Completed By: **Cheyenne Cason** 12/30/2022 8:01:26 AM

Reviewed By: **TMC** 12/30/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

Adjusted?

Checked by:

15 yr 12/30/22
147
(<2 or >12 unless noted)
NO
Jm 12/30/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.5 | Good | Not Present | Morty | | |
| 2 | 2.1 | Good | Not Present | Morty | | |
| 3 | 0.7 | Good | Not Present | Morty | | |
| 4 | 2.2 | Good | Not Present | Morty | | |

[illegible][illegible]

Tel. 505-345-3975 Fax 505-345-4107

Project Manager

Lesli Alexander

Sampler:

Index

of Coolers: 4 Mark

Cooler Temp (including CF): See Rec

| Confidential | Preservative |
|--------------|--------------|
|--------------|--------------|

Type and #

[illegible]

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
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100

22/05/2017

223

Downloaded from <http://ajph.org/> on November 10, 2015

contracted to other accredited laboratories. This is

Released to Imaging: 8/14/2026 5:09:31 PM

Any sub-contracted data will be clearly notated on the analytical report. This server is not for other accredited laboratories. If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This server is not for other accredited laboratories.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212303

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/7/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued January 06, 2023.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212303
Date: 1/9/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for sample MKTF-18R.

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:10:00 AM

Lab ID: 2212303-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 3:30:00 PM | R93213 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 3:30:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 91.8 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 5:47:03 PM | R93183 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 5:47:03 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:10:00 AM

Lab ID: 2212303-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 5:58:46 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:10:00 AM

Lab ID: 2212303-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.037 | 0.016 | 0.064 | JB | mg/L | 1 | 12/14/2022 2:41:15 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 2:41:15 PM | 71994 |
| Surr: DNOP | 98.2 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 2:41:15 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: 2-Fluorophenol | 44.2 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: Phenol-d5 | 32.8 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 62.9 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: Nitrobenzene-d5 | 59.8 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 54.4 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 89.5 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 2:05:39 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 6:10:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** EB-12-6-22**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/6/2022 9:10:00 AM**Lab ID:** 2212303-001C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 56.0 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 52.3 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 6:10:00 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 114 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 6:10:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:10:00 AM

Lab ID: 2212303-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Chromium | 0.0027 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Cobalt | 0.0050 | 0.0035 | 0.0060 | J | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 5:22:34 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/13/2022 12:39:00 P | 71965 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:19:37 PM | 71965 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:19:37 PM | 71965 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:19:37 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 2:04:00 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:10:00 AM

Lab ID: 2212303-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.0016 | 0.0011 | 0.0020 | J | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Beryllium | 0.0010 | 0.00059 | 0.0020 | J | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| Zinc | 0.0072 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 3:58:12 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/8/2022 5:27:50 PM | A93132 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 12/8/2022 5:27:50 PM | A93132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/14/2022 3:35:58 PM | A93305 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/8/2022 5:27:50 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 2:06:10 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-001F

Client Sample ID: EB-12-6-22

Collection Date: 12/6/2022 9:10:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:34:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.033 | 0.0090 | 0.050 | J | mg/L | 1 | 12/13/2022 3:49:00 PM | R93213 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 3:49:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Methylene Chloride | 3.9 | 0.50 | 3.0 | | µg/L | 1 | 12/12/2022 11:14:12 A | R93209 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 92.5 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Surr: Dibromofluoromethane | 115 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 6:15:29 PM | R93183 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 6:15:29 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 6:28:41 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.051 | 0.016 | 0.064 | JB | mg/L | 1 | 12/14/2022 3:05:06 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 3:05:06 PM | 71994 |
| Surr: DNOP | 101 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 3:05:06 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: 2-Fluorophenol | 26.5 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: Phenol-d5 | 21.6 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 31.4 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: Nitrobenzene-d5 | 37.8 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 33.2 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 79.9 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 2:46:44 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.84 | 0.11 | 1.0 | J | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 6:54:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 34.0 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 32.8 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 6:54:00 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 90.6 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 6:54:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.081 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Cobalt | 0.016 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Silver | 0.0019 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Vanadium | 0.0040 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 5:27:19 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/13/2022 12:41:27 P | 71965 |
| Arsenic | 0.0011 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:22:03 PM | 71965 |
| Lead | 0.0011 | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:22:03 PM | 71965 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:22:03 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00017 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 4:16:40 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-46

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:20:00 AM

Lab ID: 2212303-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.042 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Silver | 0.0032 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Vanadium | 0.0037 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 4:01:13 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00057 | 0.00044 | 0.0010 | J | mg/L | 1 | 12/8/2022 5:43:12 PM | A93132 |
| Arsenic | 0.00081 | 0.00012 | 0.0010 | J | mg/L | 1 | 12/8/2022 5:43:12 PM | A93132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 1:19:11 PM | A93335 |
| Selenium | 0.00069 | 0.00034 | 0.0010 | J | mg/L | 1 | 12/8/2022 5:43:12 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:17:37 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-002F

Client Sample ID: MKTF-46

Collection Date: 12/6/2022 9:20:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:36:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|--------------|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: CCM | | |
| Gasoline Range Organics (GRO) | 8.4 | 0.090 | 0.50 | | mg/L | 10 | 12/13/2022 4:09:00 PM | R93213 |
| Surr: BFB | 112 | 0 | 70-130 | | %Rec | 10 | 12/13/2022 4:09:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: JR | | |
| Benzene | 2600 | 23 | 100 | | µg/L | 100 | 12/9/2022 6:44:03 PM | R93183 |
| Toluene | 410 | 2.0 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Ethylbenzene | 47 | 2.1 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | 170 | 3.9 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,2,4-Trimethylbenzene | 39 | 1.2 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,3,5-Trimethylbenzene | 15 | 1.8 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 2.5 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Acetone | ND | 25 | 100 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Bromomethane | ND | 8.5 | 30 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 2-Butanone | ND | 20 | 100 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Carbon disulfide | ND | 5.9 | 100 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Chlorobenzene | ND | 1.6 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Chloroform | ND | 1.3 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Chloromethane | ND | 4.1 | 30 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| cis-1,2-DCE | ND | 3.9 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,1-Dichloroethane | ND | 2.7 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,1-Dichloroethene | ND | 2.0 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Isopropylbenzene | ND | 1.8 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 4-Isopropyltoluene | ND | 2.0 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Methylene Chloride | ND | 5.0 | 30 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| n-Butylbenzene | ND | 2.5 | 30 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| n-Propylbenzene | 5.6 | 1.8 | 10 | J | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| sec-Butylbenzene | ND | 1.4 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Styrene | ND | 1.4 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 3.6 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 3.0 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Trichloroethene (TCE) | ND | 2.0 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Vinyl chloride | ND | 3.2 | 10 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Xylenes, Total | 340 | 3.7 | 15 | | µg/L | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 85.5 | 0 | 70-130 | | %Rec | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 10 | 12/9/2022 7:12:41 PM | R93183 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 10 | 12/9/2022 7:12:41 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/8/2022 6:43:36 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.5 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 3:28:55 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 3:28:55 PM | 71994 |
| Surr: DNOP | 96.9 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 3:28:55 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 2,4-Dimethylphenol | 10 | 5.8 | 10 | J | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 1-Methylnaphthalene | 89 | 4.3 | 5.0 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 2-Methylnaphthalene | 87 | 4.2 | 5.0 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 2-Methylphenol | 25 | 5.0 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Naphthalene | 52 | 3.2 | 5.0 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Phenol | 19 | 18 | 20 | J | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: 2-Fluorophenol | 37.7 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: Phenol-d5 | 31.7 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 70.8 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: Nitrobenzene-d5 | 54.6 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 51.6 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 80.3 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 3:27:57 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 10 | 0.11 | 1.0 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Acenaphthene | 5.5 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Fluorene | 6.7 | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Phenanthrene | 5.6 | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Anthracene | 0.38 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Fluoranthene | 0.14 | 0.14 | 0.30 | J | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Benz(a)anthracene | 0.16 | 0.15 | 0.30 | J | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 7:38:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 50.1 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 44.6 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 7:38:00 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 75.4 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 7:38:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 2.7 | 0.0079 | 0.015 | * | mg/L | 5 | 12/12/2022 5:38:23 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Cobalt | 0.0097 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Nickel | 0.0084 | 0.0053 | 0.010 | J | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Vanadium | 0.0037 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| Zinc | 0.0066 | 0.0039 | 0.010 | J | mg/L | 1 | 12/12/2022 5:37:00 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/13/2022 12:43:53 P | 71965 |
| Arsenic | 0.0042 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:24:30 PM | 71965 |
| Lead | 0.0018 | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:24:30 PM | 71965 |
| Selenium | 0.0011 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:24:30 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 2:19:46 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-18R

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 9:50:00 AM

Lab ID: 2212303-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 1.9 | 0.0056 | 0.010 | | mg/L | 5 | 12/22/2022 4:10:18 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Nickel | 0.0075 | 0.0033 | 0.010 | J | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Silver | 0.0014 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| Zinc | 0.19 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:08:35 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00061 | 0.00044 | 0.0010 | J | mg/L | 1 | 12/8/2022 5:53:26 PM | A93132 |
| Arsenic | 0.0080 | 0.00012 | 0.0010 | | mg/L | 1 | 12/14/2022 3:46:12 PM | A93305 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/14/2022 3:46:12 PM | A93305 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/14/2022 3:46:12 PM | A93305 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:21:54 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|----------------------|
| CLIENT: | Marathon | Client Sample ID: | MKTF-18R |
| Project: | 2022 GW Sampling 4th Quarter | Collection Date: | 12/6/2022 9:50:00 AM |
| Lab ID: | 2212303-003F | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:37:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | |
|-------------|---|---|
| Qualifiers: | * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| | D Sample Diluted Due to Matrix | E Above Quantitation Range/Estimated Value |
| | H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| | ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| | PQL Practical Quantitative Limit | RL Reporting Limit |
| | S % Recovery outside of standard limits. If undiluted results may be estimated. | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-16

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:10:00 AM

Lab ID: 2212303-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 2.1 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 4:29:00 PM | R93213 |
| Surr: BFB | 152 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 4:29:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 450 | 1.1 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Toluene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Ethylbenzene | 76 | 1.1 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | 11 | 2.0 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,2,4-Trimethylbenzene | 27 | 0.61 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.91 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Acetone | ND | 13 | 50 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 2-Butanone | ND | 10 | 50 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,1-Dichloroethane | 9.1 | 1.4 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Isopropylbenzene | 3.2 | 0.91 | 5.0 | J | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 4-Isopropyltoluene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| n-Butylbenzene | ND | 1.3 | 15 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| n-Propylbenzene | 6.5 | 0.91 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| sec-Butylbenzene | ND | 0.72 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Xylenes, Total | ND | 1.9 | 7.5 | | µg/L | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 83.9 | 0 | 70-130 | | %Rec | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Surr: Dibromofluoromethane | 103 | 0 | 70-130 | | %Rec | 5 | 12/9/2022 7:41:17 PM | R93183 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 5 | 12/9/2022 7:41:17 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-004B

Client Sample ID: MKTF-16

Collection Date: 12/6/2022 10:10:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 7:13:28 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:35:00 AM

Lab ID: 2212303-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 4:48:00 PM | R93213 |
| Surr: BFB | 99.0 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 4:48:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Methylene Chloride | 3.3 | 0.50 | 3.0 | | µg/L | 1 | 12/12/2022 11:42:55 A | R93209 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 94.8 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Surr: Dibromofluoromethane | 116 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:09:53 PM | R93183 |
| Surr: Toluene-d8 | 99.1 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:09:53 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-005B

Client Sample ID: PW-3

Collection Date: 12/6/2022 10:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 7:58:10 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:35:00 AM

Lab ID: 2212303-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.019 | 0.016 | 0.064 | JB | mg/L | 1 | 12/14/2022 3:52:38 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 3:52:38 PM | 71994 |
| Surr: DNOP | 100 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 3:52:38 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: 2-Fluorophenol | 31.9 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: Phenol-d5 | 32.9 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 12.3 | 0 | 15-108 | S | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: Nitrobenzene-d5 | 58.4 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 50.0 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 80.3 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 4:09:37 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 9:17:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** PW-3**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/6/2022 10:35:00 AM**Lab ID:** 2212303-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.4 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 52.1 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 9:17:00 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 108 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 9:17:00 PM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:35:00 AM

Lab ID: 2212303-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.014 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Silver | 0.0033 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| Zinc | 0.034 | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 5:41:34 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:43:35 PM | 71965 |
| Arsenic | 0.0035 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:26:57 PM | 71965 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:26:57 PM | 71965 |
| Selenium | 0.0014 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:26:57 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:24:02 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: PW-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:35:00 AM

Lab ID: 2212303-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.012 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Silver | 0.0040 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Vanadium | 0.0038 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| Zinc | 0.065 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:12:03 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00066 | 0.00044 | 0.0010 | J | mg/L | 1 | 12/8/2022 5:58:33 PM | A93132 |
| Arsenic | 0.0038 | 0.00012 | 0.0010 | | mg/L | 1 | 12/8/2022 5:58:33 PM | A93132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 1:24:33 PM | A93335 |
| Selenium | 0.0011 | 0.00034 | 0.0010 | | mg/L | 1 | 12/8/2022 5:58:33 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:26:11 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-005F

Client Sample ID: PW-3

Collection Date: 12/6/2022 10:35:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:38:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:50:00 AM

Lab ID: 2212303-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.52 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 5:08:00 PM | R93213 |
| Surr: BFB | 206 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 5:08:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 37 | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Toluene | 13 | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Ethylbenzene | 17 | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | 1.9 | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,2,4-Trimethylbenzene | 14 | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,3,5-Trimethylbenzene | 12 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Acetone | 44 | 2.5 | 10 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Isopropylbenzene | 3.4 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 4-Isopropyltoluene | 2.0 | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Methylene Chloride | 2.9 | 0.50 | 3.0 | J | µg/L | 1 | 12/12/2022 12:11:38 P | R93209 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| n-Propylbenzene | 4.0 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Xylenes, Total | 35 | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 70.2 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Surr: Dibromofluoromethane | 94.6 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:38:31 PM | R93183 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 8:38:31 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:50:00 AM

Lab ID: 2212303-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/8/2022 8:28:03 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:50:00 AM

Lab ID: 2212303-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.8 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 4:40:05 PM | 71994 |
| Motor Oil Range Organics (MRO) | 0.13 | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 4:40:05 PM | 71994 |
| Surr: DNOP | 107 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 4:40:05 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: 2-Fluorophenol | 42.9 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: Phenol-d5 | 35.1 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 70.6 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: Nitrobenzene-d5 | 58.2 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 51.5 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 75.7 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 4:51:09 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.26 | 0.11 | 1.0 | J | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Naphthalene | 1.3 | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| 1-Methylnaphthalene | 4.0 | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| 2-Methylnaphthalene | 3.0 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Acenaphthene | 1.1 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Fluorene | 1.2 | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Phenanthrene | 1.7 | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Anthracene | 0.44 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Fluoranthene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 10:00:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** East LDU**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/6/2022 10:50:00 AM**Lab ID:** 2212303-006C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 57.2 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 10:00:00 P | 71974 |
| Surr: 2-Fluorobiphenyl | 47.7 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 10:00:00 P | 71974 |
| Surr: 4-Terphenyl-d14 | 76.0 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 10:00:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:50:00 AM

Lab ID: 2212303-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.080 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Beryllium | 0.0012 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Chromium | 1.7 | 0.0098 | 0.030 | * | mg/L | 5 | 12/12/2022 5:47:43 PM | 71965 |
| Cobalt | 0.10 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Nickel | 1.4 | 0.027 | 0.050 | * | mg/L | 5 | 12/12/2022 5:47:43 PM | 71965 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Vanadium | 0.055 | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| Zinc | 0.22 | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 5:46:22 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:46:01 PM | 71965 |
| Arsenic | 0.00079 | 0.00022 | 0.0010 | J | mg/L | 1 | 12/12/2022 3:29:25 PM | 71965 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:29:25 PM | 71965 |
| Selenium | 0.0011 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:29:25 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 4:18:48 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: East LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:50:00 AM

Lab ID: 2212303-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.015 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Beryllium | 0.0016 | 0.00059 | 0.0020 | J | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Chromium | 1.5 | 0.0098 | 0.030 | * | mg/L | 5 | 12/22/2022 4:17:30 PM | B93514 |
| Cobalt | 0.015 | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Nickel | 1.4 | 0.016 | 0.050 | * | mg/L | 5 | 12/22/2022 4:17:30 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Vanadium | 0.0061 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| Zinc | 0.086 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:15:45 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/8/2022 6:03:40 PM | A93132 |
| Arsenic | 0.00058 | 0.00012 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:03:40 PM | A93132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 3:43:33 PM | D93335 |
| Selenium | 0.00071 | 0.00034 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:03:40 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:34:46 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-006F

Client Sample ID: East LDU

Collection Date: 12/6/2022 10:50:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:39:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.31 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 5:28:00 PM | R93213 |
| Surr: BFB | 230 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 5:28:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 27 | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Toluene | 2.4 | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Ethylbenzene | 10 | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | 9.4 | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,2,4-Trimethylbenzene | 0.85 | 0.12 | 1.0 | J | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,3,5-Trimethylbenzene | 2.7 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Isopropylbenzene | 2.2 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 4-Isopropyltoluene | 0.64 | 0.20 | 1.0 | J | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| n-Propylbenzene | 1.6 | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| sec-Butylbenzene | 0.70 | 0.14 | 1.0 | J | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Xylenes, Total | 0.88 | 0.37 | 1.5 | J | µg/L | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 122 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 72.7 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Surr: Dibromofluoromethane | 102 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:07:10 PM | R93183 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:07:10 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/8/2022 8:57:48 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 2.9 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 5:03:49 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 5:03:49 PM | 71994 |
| Surr: DNOP | 101 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 5:03:49 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: 2-Fluorophenol | 51.7 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | S | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 79.2 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: Nitrobenzene-d5 | 64.7 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 54.9 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 80.6 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 5:32:16 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 4.7 | 0.11 | 1.0 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Naphthalene | 0.84 | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| 1-Methylnaphthalene | 1.2 | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Acenaphthene | 0.40 | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Fluorene | 0.54 | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Phenanthrene | 0.40 | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Fluoranthene | 0.14 | 0.14 | 0.30 | J | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 10:43:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** West LDU**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/6/2022 11:00:00 AM**Lab ID:** 2212303-007C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.1 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 10:43:00 P | 71974 |
| Surr: 2-Fluorobiphenyl | 47.9 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 10:43:00 P | 71974 |
| Surr: 4-Terphenyl-d14 | 74.0 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 10:43:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.098 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Chromium | 0.33 | 0.0020 | 0.0060 | * | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Cobalt | 0.12 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Nickel | 1.0 | 0.027 | 0.050 | * | mg/L | 5 | 12/12/2022 5:58:12 PM | 71965 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Vanadium | 0.077 | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| Zinc | 0.026 | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 5:56:49 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:48:27 PM | 71965 |
| Arsenic | 0.00059 | 0.00022 | 0.0010 | J | mg/L | 1 | 12/12/2022 3:31:51 PM | 71965 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:31:51 PM | 71965 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:31:51 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:36:55 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: West LDU

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.039 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Beryllium | 0.0010 | 0.00059 | 0.0020 | J | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Chromium | 0.12 | 0.0020 | 0.0060 | * | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Nickel | 0.98 | 0.0033 | 0.010 | * | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Vanadium | 0.0051 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| Zinc | 0.13 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:21:15 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/8/2022 6:19:03 PM | A93132 |
| Arsenic | 0.00062 | 0.00012 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:19:03 PM | A93132 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 3:47:25 PM | D93335 |
| Selenium | 0.00048 | 0.00034 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:19:03 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:25:15 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-007F

Client Sample ID: West LDU

Collection Date: 12/6/2022 11:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:40:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 11:00:00 AM

Lab ID: 2212303-008A

Matrix: Aqueous

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 92.1 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:35:47 PM | R93183 |
| Surr: Toluene-d8 | 101 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 9:35:47 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.030 | 0.0090 | 0.050 | J | mg/L | 1 | 12/13/2022 5:47:00 PM | R93213 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 5:47:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Chlorobenzene | 0.67 | 0.16 | 1.0 | J | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Surr: 4-Bromofluorobenzene | 95.3 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 10:04:24 PM | R93183 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 1 | 12/9/2022 10:04:24 PM | R93183 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

| | | | |
|----------|------------------------------|-------------------|-------------|
| CLIENT: | Marathon | Client Sample ID: | DUP-12-6-22 |
| Project: | 2022 GW Sampling 4th Quarter | Collection Date: | 12/6/2022 |
| Lab ID: | 2212303-009B | Matrix: | Groundwater |

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 12/8/2022 9:27:28 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.077 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 5:27:27 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 5:27:27 PM | 71994 |
| Surr: DNOP | 99.0 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 5:27:27 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: 2-Fluorophenol | 33.0 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: Phenol-d5 | 25.8 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 34.4 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: Nitrobenzene-d5 | 48.8 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 41.4 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 81.1 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 6:13:00 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.1 | 0.11 | 1.0 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/12/2022 11:26:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 43.4 | 0 | 15-108 | | %Rec | 1 | 12/12/2022 11:26:00 P | 71974 |
| Surr: 2-Fluorobiphenyl | 37.3 | 0 | 15-107 | | %Rec | 1 | 12/12/2022 11:26:00 P | 71974 |
| Surr: 4-Terphenyl-d14 | 83.8 | 0 | 15-166 | | %Rec | 1 | 12/12/2022 11:26:00 P | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.087 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Cobalt | 0.016 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Silver | 0.0022 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Vanadium | 0.0044 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:00:52 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:50:52 PM | 71965 |
| Arsenic | 0.0010 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:34:18 PM | 71965 |
| Lead | 0.0011 | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:34:18 PM | 71965 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:34:18 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00014 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 4:27:23 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.041 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Silver | 0.0030 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Vanadium | 0.0034 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| Zinc | 0.0044 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 4:24:56 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/8/2022 6:24:10 PM | A93132 |
| Arsenic | 0.00071 | 0.00012 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:24:10 PM | A93132 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 3:59:05 PM | D93335 |
| Selenium | 0.00060 | 0.00034 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:24:10 PM | A93132 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:29:31 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-6-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022

Lab ID: 2212303-009F

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:41:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:00:00 AM

Lab ID: 2212303-010A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.29 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 6:07:00 PM | R93213 |
| Surr: BFB | 149 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 6:07:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 16 | 0.23 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Ethylbenzene | 3.8 | 0.21 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Methyl tert-butyl ether (MTBE) | 0.91 | 0.39 | 1.0 | J | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,2,4-Trimethylbenzene | 22 | 0.12 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,3,5-Trimethylbenzene | 7.7 | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Acetone | 16 | 2.5 | 10 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 2-Butanone | 3.7 | 2.0 | 10 | J | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Isopropylbenzene | 3.7 | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 4-Isopropyltoluene | 1.3 | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| n-Butylbenzene | 0.85 | 0.25 | 3.0 | J | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| n-Propylbenzene | 3.8 | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| sec-Butylbenzene | 0.98 | 0.14 | 1.0 | J | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Xylenes, Total | 5.3 | 0.37 | 1.5 | | µg/L | 1 | 12/12/2022 12:40:22 P | R93209 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 12:40:22 P | R93209 |
| Surr: 4-Bromofluorobenzene | 79.2 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 12:40:22 P | R93209 |
| Surr: Dibromofluoromethane | 97.1 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 12:40:22 P | R93209 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 12:40:22 P | R93209 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT:

Marathon

Project:

2022 GW Sampling 4th Quarter

Lab ID:

2212303-010B

Client Sample ID: MKTF-38

Collection Date: 12/6/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 9:57:11 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
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| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
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| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:00:00 AM

Lab ID: 2212303-010C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.43 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 5:50:58 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 5:50:58 PM | 71994 |
| Surr: DNOP | 106 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 5:50:58 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: 2-Fluorophenol | 41.4 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: Phenol-d5 | 32.5 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 46.3 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: Nitrobenzene-d5 | 63.0 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 56.5 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 82.6 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 6:54:19 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.6 | 0.11 | 1.0 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Naphthalene | 7.6 | 0.20 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| 1-Methylnaphthalene | 8.1 | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| 2-Methylnaphthalene | 7.3 | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Acenaphthene | 0.24 | 0.14 | 0.30 | J | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Fluorene | 0.50 | 0.095 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/13/2022 12:09:00 A | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** MKTF-38**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/6/2022 10:00:00 AM**Lab ID:** 2212303-010C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 60.3 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 12:09:00 A | 71974 |
| Surr: 2-Fluorobiphenyl | 51.2 | 0 | 15-107 | | %Rec | 1 | 12/13/2022 12:09:00 A | 71974 |
| Surr: 4-Terphenyl-d14 | 86.9 | 0 | 15-166 | | %Rec | 1 | 12/13/2022 12:09:00 A | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:00:00 AM

Lab ID: 2212303-010D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.095 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Cobalt | 0.011 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Silver | 0.0021 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:05:39 PM | 71965 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:58:12 PM | 71965 |
| Arsenic | 0.011 | 0.00022 | 0.0010 | * | mg/L | 1 | 12/12/2022 3:36:44 PM | 71965 |
| Lead | 0.00098 | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:36:44 PM | 71965 |
| Selenium | 0.0016 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:36:44 PM | 71965 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00012 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:51:54 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-38

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/6/2022 10:00:00 AM

Lab ID: 2212303-010E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.084 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Beryllium | 0.0019 | 0.00059 | 0.0020 | J | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Cadmium | 0.0011 | 0.00098 | 0.0020 | J | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Silver | 0.0035 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Vanadium | 0.0038 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:40:07 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00085 | 0.00044 | 0.0010 | J | mg/L | 1 | 12/8/2022 6:29:17 PM | A93132 |
| Arsenic | 0.010 | 0.00061 | 0.0050 | * | mg/L | 5 | 12/15/2022 4:18:35 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 4:18:35 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 4:18:35 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00010 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:54:03 PM | 72127 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212303-010F

Client Sample ID: MKTF-38

Collection Date: 12/6/2022 10:00:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------------|--------|---------|---------|------|-------|----|-----------------------|----------|
| EPA 335.4: TOTAL CYANIDE SUBBED | | | | | | | Analyst: PAC | |
| Cyanide | ND | 0.00500 | 0.00500 | | mg/L | 1 | 12/14/2022 2:42:00 PM | R93762 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212303-011A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Surr: 4-Bromofluorobenzene | 98.0 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Surr: Dibromofluoromethane | 113 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 2:06:30 PM | R93209 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 12/12/2022 2:06:30 PM | R93209 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212303

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212303-011B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/8/2022 10:26:49 PM | 71922 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



ANALYTICAL REPORT

December 14, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1565219

Samples Received: 12/08/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
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| Cp: Cover Page | 1 | <div><div>1</div>Cp</div> |
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| Sr: Sample Results | 5 | <div><div>3</div>Ss</div> |
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| 2212303-002F MKTF-46 L1565219-02 | 6 | <div><div>4</div>Cn</div> |
| 2212303-003F MKTF-18R L1565219-03 | 7 | <div><div>5</div>Sr</div> |
| 2212303-005F PW-3 L1565219-04 | 8 | |
| 2212303-006F EAST LDU L1565219-05 | 9 | <div><div>6</div>Qc</div> |
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| Al: Accreditations & Locations | 15 | |
| Sc: Sample Chain of Custody | 16 | |

2212303-001F EB-12-6-22 L1565219-01 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 09:10 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:34 | LDT | Mt. Juliet, TN |

1
Cp2
Tc3
Ss4
Cn5
Sr6
Qc7
Gl8
Al9
Sc

2212303-002F MKTF-46 L1565219-02 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 09:20 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:36 | LDT | Mt. Juliet, TN |

2212303-003F MKTF-18R L1565219-03 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 09:50 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:37 | LDT | Mt. Juliet, TN |

2212303-005F PW-3 L1565219-04 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 10:35 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:38 | LDT | Mt. Juliet, TN |

2212303-006F EAST LDU L1565219-05 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 10:50 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:39 | LDT | Mt. Juliet, TN |

2212303-007F WEST LDU L1565219-06 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 11:00 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:40 | LDT | Mt. Juliet, TN |

2212303-009F DUP-12-6-22 L1565219-07 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 00:00 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:41 | LDT | Mt. Juliet, TN |

2212303-010F MKTF-38 L1565219-08 GW

| | | | | Collected by | Collected date/time | Received date/time |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------------------|--------------------|
| | | | | | 12/06/22 10:00 | 12/08/22 09:00 |
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1971426 | 1 | 12/13/22 02:21 | 12/14/22 14:42 | LDT | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:34 | WG1971426 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:36 | WG1971426 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:37 | WG1971426 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Collected date/time: 12/06/22 10:35

L1565219

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:38 | WG1971426 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 12/06/22 10:50

L1565219

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:39 | WG1971426 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result
mg/l | Qualifier | RDL
mg/l | Dilution | Analysis
date / time | Batch |
|---------|----------------|--------------------|-------------|----------|-------------------------|---------------------------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:40 | WG1971426 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:41 | WG1971426 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 12/06/22 10:00

L1565219

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | J4 | 0.00500 | 1 | 12/14/2022 14:42 | WG1971426 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3871820-19 12/14/22 14:21

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1564687-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1564687-02 12/14/22 14:25 • (DUP) R3871820-26 12/14/22 14:26

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1565219-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1565219-01 12/14/22 14:34 • (DUP) R3871820-30 12/14/22 14:35

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1564687-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1564687-03 12/14/22 14:27 • (MS) R3871820-27 12/14/22 14:28 • (MSD) R3871820-28 12/14/22 14:29

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0989 | 0.0985 | 98.9 | 98.5 | 1 | 90.0-110 | | | 0.405 | 20 |

1

Cp

2

Tc

3

Ss

4

Cn

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

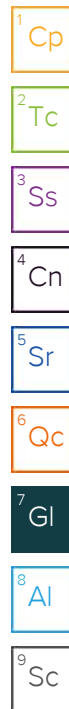
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| J4 | The associated batch QC was outside the established quality control range for accuracy. |
|----|---|



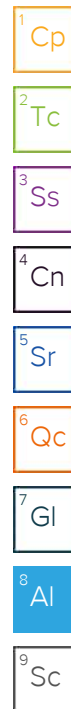
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

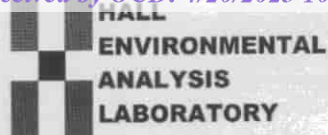
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

Page 4161 of 5177

E179

| | | | | | | | |
|---|--------------|-------------------------|---------------------|------------------------------|-----------------------|----------------------------|-----------------------------|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2212303-001F | EB-12-6-22 | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 9:10:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212303-002F | MKTF-46 | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 9:20:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212303-003F | MKTF-18R | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 9:50:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212303-005F | PW-3 | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 10:35:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2212303-006F | East LDU | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 10:50:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2212303-007F | West LDU | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 11:00:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2212303-009F | DUP-12-6-22 | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 | 1 | Total Cyanide J and MDL -07 |
| 8 | 2212303-010F | MKTF-38 | 500AMBHDP
E.NAOH | Groundw
ater | 12/6/2022 10:00:00 AM | 1 | Total Cyanide J and MDL -08 |

Sample Receipt Checklist
COC Seal Present/Intact: ☒ Y ☐ N IF Applicable
COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

770708221628

GBA2
0.410=0.4

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|--|------------------------|-----------------------|-----------------------------------|----------------------|-------------------|--|--|
| Relinquished By: <i>SW</i> | Date: 12/7/2022 | Time: 12:34 PM | Received By: <i>Jeffie Julian</i> | Date: 12-8-22 | Time: 9:00 | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-71965 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 71965 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/8/2022 | Analysis Date: 12/12/2022 | SeqNo: 3358950 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-71965 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 71965 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/8/2022 | Analysis Date: 12/12/2022 | SeqNo: 3358951 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 93.5 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 93.8 | 50 | 150 | | | J |
| Cadmium | 0.0016 | 0.0020 | 0.002000 | 0 | 80.8 | 50 | 150 | | | J |
| Chromium | 0.0050 | 0.0060 | 0.006000 | 0 | 83.1 | 50 | 150 | | | J |
| Cobalt | 0.0070 | 0.0060 | 0.006000 | 0 | 116 | 50 | 150 | | | |
| Nickel | 0.0043 | 0.010 | 0.005000 | 0 | 86.2 | 50 | 150 | | | J |
| Silver | 0.0039 | 0.0050 | 0.005000 | 0 | 78.3 | 50 | 150 | | | J |
| Vanadium | 0.0095 | 0.050 | 0.01000 | 0 | 95.2 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 118 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-71965 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 71965 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/8/2022 | Analysis Date: 12/12/2022 | SeqNo: 3358955 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0030 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Beryllium | 0.53 | 0.0020 | 0.5000 | 0 | 106 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 85 | 115 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Silver | 0.095 | 0.0050 | 0.1000 | 0 | 94.7 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Zinc | 0.53 | 0.010 | 0.5000 | 0 | 106 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373357 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0013 | 0.0020 | | | | | | | | J |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373358 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.8 | 50 | 150 | | | J |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 83.5 | 50 | 150 | | | J |
| Chromium | 0.0057 | 0.0060 | 0.006000 | 0 | 95.6 | 50 | 150 | | | J |
| Cobalt | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 80.5 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 93.9 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 94.4 | 50 | 150 | | | J |
| Zinc | 0.0094 | 0.010 | 0.01000 | 0 | 93.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373359 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: 2212303-009EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: DUP-12-6-22 | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373375 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.54 | 0.0020 | 0.5000 | 0.04092 | 99.1 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 99.0 | 70 | 130 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.2 | 70 | 130 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 90.6 | 70 | 130 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.8 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0.002964 | 99.2 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.003351 | 99.1 | 70 | 130 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0.004425 | 96.9 | 70 | 130 | | | |

| Sample ID: 2212303-009EMSD | SampType: MSD | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|-----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: DUP-12-6-22 | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373378 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0.04092 | 96.3 | 70 | 130 | 2.65 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0.316 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.1 | 70 | 130 | 4.09 | 20 | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0 | 92.2 | 70 | 130 | 3.15 | 20 | |
| Cobalt | 0.44 | 0.0060 | 0.5000 | 0 | 87.6 | 70 | 130 | 3.37 | 20 | |
| Nickel | 0.46 | 0.010 | 0.5000 | 0 | 92.0 | 70 | 130 | 2.96 | 20 | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0.002964 | 94.5 | 70 | 130 | 4.66 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.003351 | 99.7 | 70 | 130 | 0.562 | 20 | |
| Zinc | 0.47 | 0.010 | 0.5000 | 0.004425 | 93.9 | 70 | 130 | 3.18 | 20 | |

| Sample ID: 2212303-010EMS | SampType: MS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
|----------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: MKTF-38 | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373383 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.57 | 0.0020 | 0.5000 | 0.08376 | 97.7 | 70 | 130 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0.001916 | 102 | 70 | 130 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0.001105 | 99.6 | 70 | 130 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.0 | 70 | 130 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 90.2 | 70 | 130 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.7 | 70 | 130 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0.003473 | 98.5 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0.003763 | 101 | 70 | 130 | | | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0.01630 | 92.9 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------------|--------|----------------------------------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: 2212303-010EMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | |
| Client ID: MKTF-38 | | Batch ID: B93514 | | RunNo: 93514 | | | | | | |
| Prep Date: | | Analysis Date: 12/22/2022 | | SeqNo: 3373384 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.55 | 0.0020 | 0.5000 | 0.08376 | 92.3 | 70 | 130 | 4.85 | 20 | |
| Beryllium | 0.49 | 0.0020 | 0.5000 | 0.001916 | 98.4 | 70 | 130 | 3.84 | 20 | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0.001105 | 94.3 | 70 | 130 | 5.51 | 20 | |
| Chromium | 0.45 | 0.0060 | 0.5000 | 0 | 90.0 | 70 | 130 | 5.44 | 20 | |
| Cobalt | 0.43 | 0.0060 | 0.5000 | 0 | 85.3 | 70 | 130 | 5.61 | 20 | |
| Nickel | 0.45 | 0.010 | 0.5000 | 0 | 89.6 | 70 | 130 | 4.43 | 20 | |
| Silver | 0.097 | 0.0050 | 0.1000 | 0.003473 | 93.1 | 70 | 130 | 5.47 | 20 | |
| Vanadium | 0.48 | 0.050 | 0.5000 | 0.003763 | 96.0 | 70 | 130 | 4.94 | 20 | |
| Zinc | 0.46 | 0.010 | 0.5000 | 0.01630 | 88.0 | 70 | 130 | 5.19 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------|--------|---------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-71965 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 71965 | | RunNo: 93211 | | | | | | |
| Prep Date: 12/8/2022 | | Analysis Date: 12/12/2022 | | SeqNo: 3359459 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-71965 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 71965 | | | RunNo: 93211 | | | | | |
| Prep Date: 12/8/2022 | | Analysis Date: 12/12/2022 | | | SeqNo: 3359460 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Arsenic | 0.0010 | 0.0010 | 0.001000 | 0 | 103 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 110 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-71965 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 71965 | | | RunNo: 93211 | | | | | |
| Prep Date: 12/8/2022 | | Analysis Date: 12/12/2022 | | | SeqNo: 3359461 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 102 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 99.1 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|----------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCS-71965 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 71965 | | RunNo: 93211 | | | | | | |
| Prep Date: 12/8/2022 | | Analysis Date: 12/12/2022 | | SeqNo: 3359502 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93132 | | RunNo: 93132 | | | | | | | |
| Prep Date: | Analysis Date: 12/8/2022 | | SeqNo: 3354932 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93132 | | RunNo: 93132 | | | | | | | |
| Prep Date: | Analysis Date: 12/8/2022 | | SeqNo: 3354933 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 120 | 50 | 150 | | | B |
| Arsenic | 0.00094 | 0.0010 | 0.001000 | 0 | 94.1 | 50 | 150 | | | J |
| Selenium | 0.00092 | 0.0010 | 0.001000 | 0 | 91.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93132 | | RunNo: 93132 | | | | | | | |
| Prep Date: | Analysis Date: 12/8/2022 | | SeqNo: 3354934 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.2 | 85 | 115 | | | B |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.2 | 85 | 115 | | | |
| Selenium | 0.024 | 0.0010 | 0.02500 | 0 | 97.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212303-001EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-6-22 | Batch ID: A93132 | | RunNo: 93132 | | | | | | | |
| Prep Date: | Analysis Date: 12/8/2022 | | SeqNo: 3354949 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 107 | 70 | 130 | | | |
| Selenium | 0.029 | 0.0010 | 0.02500 | 0 | 116 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|---------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212303-001EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-6-22 | Batch ID: A93132 | | RunNo: 93132 | | | | | | | |
| Prep Date: | Analysis Date: 12/8/2022 | | SeqNo: 3354950 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 70 | 130 | 3.29 | 20 | |
| Selenium | 0.029 | 0.0010 | 0.02500 | 0 | 114 | 70 | 130 | 1.17 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|----------------------------|--------------------------|--|
| Sample ID: 2212303-002EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: MKTF-46 | Batch ID: A93132 | RunNo: 93132 |
| Prep Date: | Analysis Date: 12/8/2022 | SeqNo: 3354952 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.029 | 0.0010 0.02500 0.0008063 111 70 130 |
| Selenium | 0.030 | 0.0010 0.02500 0.0006863 117 70 130 |

| | | |
|----------------|---------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: A93305 | RunNo: 93305 |
| Prep Date: | Analysis Date: 12/14/2022 | SeqNo: 3363137 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|--------------------|---------------------------|--|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: BatchQC | Batch ID: A93305 | RunNo: 93305 |
| Prep Date: | Analysis Date: 12/14/2022 | SeqNo: 3363138 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.00098 | 0.0010 0.001000 0 97.5 50 150 J |
| Lead | 0.00050 | 0.00050 0.0005000 0 100 50 150 |
| Selenium | 0.00096 | 0.0010 0.001000 0 95.5 50 150 J |

| | | |
|-----------------|---------------------------|--|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: LCSW | Batch ID: A93305 | RunNo: 93305 |
| Prep Date: | Analysis Date: 12/14/2022 | SeqNo: 3363139 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Arsenic | 0.024 | 0.0010 0.02500 0 94.4 85 115 |
| Lead | 0.012 | 0.00050 0.01250 0 98.4 85 115 |
| Selenium | 0.025 | 0.0010 0.02500 0 101 85 115 |

| | | |
|----------------|---------------------------|--|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals |
| Client ID: PBW | Batch ID: A93335 | RunNo: 93335 |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3364955 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Lead | ND | 0.00050 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3364956 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3364957 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|----------------------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 2212303-002EMSL | SampType: MS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: MKTF-46 | Batch ID: A93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3364991 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 90.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: D93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3367248 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|--------------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: D93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3367249 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00058 | 0.00050 | 0.0005000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|---------------------------|---------------------------------------|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: D93335 | RunNo: 93335 | | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | SeqNo: 3367250 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|--------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: LCSW | Batch ID: D93335 | | | | RunNo: 93335 | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | | SeqNo: 3367250 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: BatchQC | Batch ID: D93335 | | | | RunNo: 93335 | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | | SeqNo: 3367251 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

Qualifiers:

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72127 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72127 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366414 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: LCSLL-72127 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72127 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366415 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00020 0.00020 0.0001500 | 0 134 50 150 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72127 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72127 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366416 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 97.5 85 115 |

| | | |
|----------------------------------|-----------------------------------|--|
| Sample ID: 2212303-006DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: East LDU | Batch ID: 72127 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367156 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0052 0.00020 0.005000 0.0001347 | 101 75 125 |

| | | |
|-----------------------------------|-----------------------------------|--|
| Sample ID: 2212303-006DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: East LDU | Batch ID: 72127 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367157 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0051 0.00020 0.005000 0.0001347 | 99.0 75 125 2.02 20 |

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E Above Quantitation Range/Estimated Value
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-71922 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 71922 | RunNo: 93151 |
| Prep Date: 12/8/2022 | Analysis Date: 12/8/2022 | SeqNo: 3355987 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: LCS-71922 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 71922 | RunNo: 93151 |
| Prep Date: 12/8/2022 | Analysis Date: 12/8/2022 | SeqNo: 3355989 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.10 | 0.010 0.1000 0 104 70 130 |

| | | |
|------------------------------|---------------------------------|--|
| Sample ID: LCSD-71922 | SampType: LCSD | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSS02 | Batch ID: 71922 | RunNo: 93151 |
| Prep Date: 12/8/2022 | Analysis Date: 12/8/2022 | SeqNo: 3355990 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 111 70 130 6.20 20 |

| | | |
|-----------------------------|---------------------------------|--|
| Sample ID: MB-71922 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 71922 | RunNo: 93151 |
| Prep Date: 12/8/2022 | Analysis Date: 12/8/2022 | SeqNo: 3356024 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-71994 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 71994 | RunNo: 93268 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | SeqNo: 3365633 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 86.7 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-71994 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 71994 | RunNo: 93268 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | SeqNo: 3365634 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 112 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.018 | | 0.01875 | | 97.7 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-71994 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 71994 | RunNo: 93268 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | SeqNo: 3365635 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 114 | 31.2 | 125 | 1.68 | 20 | B |
| Surr: DNOP | 0.017 | | 0.01875 | | 91.3 | 15.9 | 177 | 0 | 0 | |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93213 | | RunNo: 93213 | | | | | | | |
| Prep Date: | Analysis Date: 12/13/2022 | | SeqNo: 3368698 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.47 | 0.050 | 0.5000 | 0 | 94.6 | 80 | 120 | | | |
| Surr: BFB | 46 | | 20.00 | | 228 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93213 | | RunNo: 93213 | | | | | | | |
| Prep Date: | Analysis Date: 12/13/2022 | | SeqNo: 3368699 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 105 | 70 | 130 | | | |

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93183 | | RunNo: 93183 | | | | | | | |
| Prep Date: | Analysis Date: 12/9/2022 | | SeqNo: 3357436 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 24 | 1.0 | 20.00 | 0 | 119 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 0 | 108 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|---------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93183 | | RunNo: 93183 | | | | | | | |
| Prep Date: | Analysis Date: 12/9/2022 | | SeqNo: 3357463 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

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S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|---------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93183 | RunNo: 93183 | | | | | | | | |
| Prep Date: | Analysis Date: 12/9/2022 | SeqNo: 3357463 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 12 | | 10.00 | | 122 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 98.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 12 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R93209 | RunNo: 93209 | | | | | | | | |
| Prep Date: | Analysis Date: 12/12/2022 | SeqNo: 3359106 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Trichloroethene (TCE) | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------------|----------------------------------|--|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212303-010ams | SampType: MS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: MKTF-38 | Batch ID: R93209 | RunNo: 93209 | | | | | | | | |
| Prep Date: | Analysis Date: 12/12/2022 | SeqNo: 3359112 | | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 38 | 1.0 | 20.00 | 16.24 | 107 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 95.4 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 8.0 | | 10.00 | | 80.0 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 97.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 101 | 70 | 130 | | | |

Qualifiers:

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|--------|---------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212303-010amsd | | SampType: MSD | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: MKTF-38 | | Batch ID: R93209 | | RunNo: 93209 | | | | | | |
| Prep Date: | | Analysis Date: 12/12/2022 | | SeqNo: 3359113 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 36 | 1.0 | 20.00 | 16.24 | 98.3 | 70 | 130 | 4.48 | 20 | |
| Toluene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | 8.00 | 20 | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 99.0 | 70 | 130 | 7.82 | 20 | |
| 1,1-Dichloroethene | 18 | 1.0 | 20.00 | 0 | 88.2 | 70 | 130 | 7.84 | 20 | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 97.3 | 70 | 130 | 5.12 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 9.5 | | 10.00 | | 95.1 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 8.0 | | 10.00 | | 79.6 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.5 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.8 | | 10.00 | | 98.3 | 70 | 130 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93209 | | RunNo: 93209 | | | | | | | |
| Prep Date: | Analysis Date: 12/12/2022 | | SeqNo: 3359144 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93209 | | | RunNo: 93209 | | | | | | |
| Prep Date: | Analysis Date: 12/12/2022 | | | SeqNo: 3359144 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | | | |

Qualifiers:

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PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-71974 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 71974 | RunNo: 93247 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360800 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 79 | | 200.0 | | 39.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 62 | | 200.0 | | 30.9 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 52.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 51.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 44 | | 100.0 | | 44.2 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 84 | | 100.0 | | 84.4 | 34.4 | 134 | | | |

| Sample ID: lcs-71974 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 71974 | RunNo: 93247 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360801 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-71974 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 71974 | | RunNo: 93247 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | SeqNo: 3360801 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 62.7 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 45 | 5.0 | 100.0 | 0 | 44.6 | 15 | 89.8 | | | |
| Phenol | 90 | 20 | 200.0 | 0 | 44.9 | 17 | 61.1 | | | |
| Pyrene | 89 | 10 | 100.0 | 0 | 89.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 50.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 78 | | 200.0 | | 39.1 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 83.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 70.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 100.0 | | 60.2 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.9 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsD-71974 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 71974 | | RunNo: 93247 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | SeqNo: 3360802 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 57 | 10 | 100.0 | 0 | 57.2 | 21.3 | 104 | 9.14 | 45.3 | |
| 1,4-Dichlorobenzene | 39 | 5.0 | 100.0 | 0 | 39.0 | 15 | 89.8 | 13.5 | 39.6 | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.7 | 17 | 61.1 | 17.4 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 78.8 | 61 | 123 | 12.3 | 11.8 | R |
| Surr: 2-Fluorophenol | 69 | | 200.0 | | 34.6 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.3 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 94 | | 200.0 | | 47.2 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.6 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.7 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.1 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-71974 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359415 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 52.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 48.7 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 130 | | 100.0 | | 130 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-71974-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359416 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.88 | 1.0 | 2.000 | 0 | 44.0 | 15 | 60.5 | | | J |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 15 | 96 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 21 | 103 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 89.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 89.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.7 | 15 | 108 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212303

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------|----------------------------------|-----------|-------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: lcs-71974-lf | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 71974 | | | RunNo: 93217 | | | | | |
| Prep Date: 12/9/2022 | | Analysis Date: 12/12/2022 | | | SeqNo: 3359416 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 0 | | 200.0 | | 0 | 15 | 112 | | | S |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 100 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|----------------------------------|-----------|-------------|-------------------------------------|----------|--------------------|------|----------|------|
| Sample ID: lcsd-71974-lf | | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | |
| Client ID: LCSS02 | | Batch ID: 71974 | | | RunNo: 93217 | | | | | |
| Prep Date: 12/9/2022 | | Analysis Date: 12/12/2022 | | | SeqNo: 3359417 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 1.0 | 2.000 | 0 | 43.0 | 15 | 60.5 | 2.30 | 29.7 | J |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 78.3 | 1.50 | 31.7 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 79.6 | 0 | 31.4 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 15 | 78.6 | 0 | 30.5 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 92 | 1.40 | 30.5 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 15 | 96 | 1.32 | 25.1 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21 | 103 | 1.18 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | 0 | 14.4 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 32.8 | 119 | 2.25 | 14.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 91.0 | 34.1 | 110 | 2.22 | 19.2 | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 32 | 132 | 3.21 | 29.3 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 31.3 | 112 | 0 | 19 | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 90.0 | 34.1 | 119 | 1.12 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 24.7 | 152 | 4.21 | 21.3 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 65.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 0 | | 200.0 | | 0 | 15 | 112 | 0 | 0 | S |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.8 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 90 | | 100.0 | | 89.9 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
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PQL Practical Quantitative Limit
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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon** Work Order Number: **2212303** RptNo: **1**

Received By: **Juan Rojas** 12/7/2022 7:30:00 AM
Completed By: **Sean Livingston** 12/7/2022 7:51:40 AM
Reviewed By: *[Signature]* 12-7-22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0° C? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

12/12/22
of preserved bottles checked for pH: 16
(1-2 or >12 unless noted)
Adjusted? 405
Checked by: Jon 12/7/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: 0.4 ml of HNO3 was added to samples 003E, 005E for pH < 2. Ju 12/7/22

17. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|---------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.9 | Good | | | | |
| 2 | 0.8 | Good | | | | |
| 3 | 0.2 | Good | | | | |
| 4 | 1.3 | Good | | | | |

Client: Marathon Gallup Refinery

Mailing Address: 92 Giant Crossing Road
Jamestown, NM 87301

Phone #: 808-640-1823

email or Fax#:

QA/QC Package: ☐ Level 4 (Full Validation)

X Standard ☐ Az Compliance ☐ NELAC ☐ Other

X EDD (Type)

Project Name: 2022 GW Sampling 4th Quarter

Project #: 697-080-001

Project Manager: Leslie Alexander

Sampler: On Ice: ☒ Yes ☐ No

of Coolers: 4

Cooler Temp (Including CFI): See Remarks

| Date | Time | Matrix | Sample Name | Container Type and # | Preservative Type | HEAL No. |
|-------|-------|--------|-------------|----------------------|-------------------|----------|
| 12/16 | 9:10 | | EST-12-6-22 | 13 | | 001 |
| 12/16 | 9:20 | | MKT-12-6-22 | 13 | | 002 |
| 12/16 | 9:30 | | MKT-12-6-22 | 13 | | 003 |
| 12/16 | 10:20 | | MKT-12-6-22 | 7 | | 004 |
| 12/16 | 10:45 | | EST-12-6-22 | 13 | | 005 |
| 12/16 | 10:50 | | EST-12-6-22 | 13 | | 006 |
| 12/16 | 11:00 | | EST-12-6-22 | 13 | | 007 |
| 12/16 | 11:00 | | EST-12-6-22 | 3 | | 008 |
| 12/16 | 11:00 | | EST-12-6-22 | 13 | | 009 |
| 12/16 | 10:00 | | MKT-12-6-22 | | | 010 |
| 12/16 | | | Top Blank | | | 011 |

Date: 12/16 Time: 12:00 Relinquished by: H. J. T. Jr.

Date: 12/16 Time: 12:00 Relinquished by: H. J. T. Jr.

Received by: Via: 12/16/22 7:30

Received by: Via: 12/16/22 7:30

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly rotated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 17, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX: (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212442

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/8/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212442
Date: 1/17/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for samples OW-57 and OW-63.

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 6:27:00 PM | R93213 |
| Surr: BFB | 98.8 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 6:27:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Surr: Dibromofluoromethane | 99.3 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:14:07 AM | R93331 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:14:07 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 6:12:19 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.035 | 0.016 | 0.064 | JB | mg/L | 1 | 12/14/2022 6:14:21 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 6:14:21 PM | 71994 |
| Surr: DNOP | 105 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 6:14:21 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: 2-Fluorophenol | 41.3 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: Phenol-d5 | 31.0 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 52.0 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: Nitrobenzene-d5 | 56.5 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 47.0 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 86.1 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 7:34:50 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/13/2022 12:51:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|------------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 55.8 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Surr: 2-Fluorobiphenyl | 50.3 | 0 | 15-107 | | %Rec | 1 | 12/13/2022 12:51:00 AM | 71974 |
| Surr: 4-Terphenyl-d14 | 104 | 0 | 15-166 | | %Rec | 1 | 12/13/2022 12:51:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:15:15 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:00:38 PM | 71980 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:39:11 PM | 71980 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:39:11 PM | 71980 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:39:11 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.000095 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 2:56:12 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:30:00 AM

Lab ID: 2212442-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| Zinc | 0.0065 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 4:56:44 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 11:20:08 AM | A93335 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 12/15/2022 11:20:08 AM | A93335 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 11:20:08 AM | A93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 1:57:13 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 2:58:20 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.47 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 6:46:00 PM | R93213 |
| Surr: BFB | 184 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 6:46:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 5.0 | 0.23 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Ethylbenzene | 20 | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,2,4-Trimethylbenzene | 33 | 0.12 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,3,5-Trimethylbenzene | 1.7 | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Isopropylbenzene | 5.1 | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 4-Isopropyltoluene | 0.95 | 0.20 | 1.0 | J | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| n-Propylbenzene | 2.4 | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| sec-Butylbenzene | 1.8 | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Xylenes, Total | 2.7 | 0.37 | 1.5 | | µg/L | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 91.0 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Surr: Dibromofluoromethane | 88.8 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:42:27 AM | R93331 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 4:42:27 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0093 | | µg/L | 1 | 12/21/2022 6:56:54 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.54 | 0.016 | 0.064 | B | mg/L | 1 | 12/14/2022 6:37:43 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 6:37:43 PM | 71994 |
| Surr: DNOP | 103 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 6:37:43 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: 2-Fluorophenol | 30.9 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: Phenol-d5 | 25.2 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 55.3 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: Nitrobenzene-d5 | 43.6 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 37.8 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 73.1 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 8:16:05 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Naphthalene | 0.94 | 0.20 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| 1-Methylnaphthalene | 0.76 | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| 2-Methylnaphthalene | 0.16 | 0.14 | 0.30 | J | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Fluorene | 0.22 | 0.095 | 0.30 | J | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Phenanthrene | 0.44 | 0.16 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Fluoranthene | 0.48 | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Pyrene | 0.34 | 0.32 | 1.0 | J | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/13/2022 1:34:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 42.1 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Surr: 2-Fluorobiphenyl | 35.2 | 0 | 15-107 | | %Rec | 1 | 12/13/2022 1:34:00 AM | 71974 |
| Surr: 4-Terphenyl-d14 | 69.9 | 0 | 15-166 | | %Rec | 1 | 12/13/2022 1:34:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.30 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Vanadium | 0.0058 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:20:01 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:03:03 PM | 71980 |
| Arsenic | 0.0022 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:41:37 PM | 71980 |
| Lead | 0.00036 | 0.00019 | 0.00050 | J | mg/L | 1 | 12/12/2022 3:41:37 PM | 71980 |
| Selenium | 0.0010 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:41:37 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 3:00:29 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-64

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 9:40:00 AM

Lab ID: 2212442-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.29 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Vanadium | 0.0048 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 4:59:50 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 11:22:50 AM | A93335 |
| Arsenic | 0.0025 | 0.00012 | 0.0010 | | mg/L | 1 | 12/15/2022 11:22:50 AM | A93335 |
| Lead | 0.000087 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 11:22:50 AM | A93335 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 11:22:50 AM | A93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 3:02:38 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 1.0 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 7:06:00 PM | R93213 |
| Surr: BFB | 101 | 0 | 70-130 | | %Rec | 1 | 12/13/2022 7:06:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 200 | 2.3 | 10 | | µg/L | 10 | 12/16/2022 4:08:55 PM | R93377 |
| Toluene | 86 | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Ethylbenzene | 5.8 | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | 1.9 | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,2,4-Trimethylbenzene | 1.5 | 0.12 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,3,5-Trimethylbenzene | 0.69 | 0.18 | 1.0 | J | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Xylenes, Total | 78 | 0.37 | 1.5 | | µg/L | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 90.8 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 97.9 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Surr: Dibromofluoromethane | 81.9 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 5:10:46 AM | R93331 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 5:10:46 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 7:26:31 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: DGH | |
| Diesel Range Organics (DRO) | 0.022 | 0.016 | 0.064 | JB | mg/L | 1 | 12/14/2022 7:01:23 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/14/2022 7:01:23 PM | 71994 |
| Surr: DNOP | 99.9 | 0 | 15.9-177 | | %Rec | 1 | 12/14/2022 7:01:23 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: 2-Fluorophenol | 36.9 | 0 | 15-84.5 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: Phenol-d5 | 28.4 | 0 | 15-67 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: 2,4,6-Tribromophenol | 50.6 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: Nitrobenzene-d5 | 52.4 | 0 | 16.8-112 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: 2-Fluorobiphenyl | 45.0 | 0 | 15-101 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| Surr: 4-Terphenyl-d14 | 76.8 | 0 | 34.4-134 | | %Rec | 1 | 12/13/2022 8:56:33 PM | 71974 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/13/2022 2:17:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 51.4 | 0 | 15-108 | | %Rec | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Surr: 2-Fluorobiphenyl | 45.2 | 0 | 15-107 | | %Rec | 1 | 12/13/2022 2:17:00 AM | 71974 |
| Surr: 4-Terphenyl-d14 | 97.9 | 0 | 15-166 | | %Rec | 1 | 12/13/2022 2:17:00 AM | 71974 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.019 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Vanadium | 0.012 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:24:45 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:05:29 PM | 71980 |
| Arsenic | 0.0015 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:48:59 PM | 71980 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:48:59 PM | 71980 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:48:59 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 3:04:47 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:05:00 AM

Lab ID: 2212442-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.020 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Vanadium | 0.013 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:03:23 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 11:25:31 AM | A93335 |
| Arsenic | 0.0018 | 0.00012 | 0.0010 | | mg/L | 1 | 12/15/2022 11:25:31 AM | A93335 |
| Lead | 0.000071 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 11:25:31 AM | A93335 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 11:25:31 AM | A93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00013 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 3:17:42 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 14 | 0.45 | 2.5 | | mg/L | 50 | 12/13/2022 7:25:00 PM | R93213 |
| Surr: BFB | 143 | 0 | 70-130 | S | %Rec | 50 | 12/13/2022 7:25:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 960 | 11 | 50 | | µg/L | 50 | 12/16/2022 4:37:33 PM | R93377 |
| Toluene | 39 | 1.0 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Ethylbenzene | 310 | 1.1 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 2.0 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 1,2,4-Trimethylbenzene | 710 | 6.1 | 50 | | µg/L | 50 | 12/16/2022 4:37:33 PM | R93377 |
| 1,3,5-Trimethylbenzene | 260 | 0.91 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 1.3 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Acetone | 100 | 13 | 50 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Bromomethane | ND | 4.3 | 15 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 2-Butanone | 55 | 10 | 50 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Carbon disulfide | ND | 3.0 | 50 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Chlorobenzene | ND | 0.78 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Chloroform | ND | 0.67 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Chloromethane | ND | 2.1 | 15 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| cis-1,2-DCE | ND | 1.9 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 1,1-Dichloroethane | ND | 1.4 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 1,1-Dichloroethene | ND | 1.0 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Isopropylbenzene | 110 | 0.91 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 4-Isopropyltoluene | 31 | 1.0 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Methylene Chloride | ND | 2.5 | 15 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| n-Butylbenzene | 19 | 1.3 | 15 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| n-Propylbenzene | 86 | 0.91 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| sec-Butylbenzene | 21 | 0.72 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Styrene | ND | 0.68 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 1.8 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 1.5 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Trichloroethene (TCE) | ND | 1.0 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Vinyl chloride | ND | 1.6 | 5.0 | | µg/L | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Xylenes, Total | 1800 | 19 | 75 | | µg/L | 50 | 12/16/2022 4:37:33 PM | R93377 |
| Surr: 1,2-Dichloroethane-d4 | 122 | 0 | 70-130 | | %Rec | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 72.0 | 0 | 70-130 | | %Rec | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Surr: Dibromofluoromethane | 82.6 | 0 | 70-130 | | %Rec | 5 | 12/16/2022 5:39:05 AM | R93331 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 5 | 12/16/2022 5:39:05 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/21/2022 7:56:08 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 5.8 | 0.16 | 0.64 | B | mg/L | 10 | 12/16/2022 2:11:37 PM | 71994 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 12/16/2022 2:11:37 PM | 71994 |
| Surr: DNOP | 0 | 0 | 15.9-177 | S | %Rec | 10 | 12/16/2022 2:11:37 PM | 71994 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 2,4-Dimethylphenol | 7.2 | 5.8 | 10 | J | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | S | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | S | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 39.0 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: Nitrobenzene-d5 | 31.6 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 27.9 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 37.7 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 1:54:30 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 5.3 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Naphthalene | 3.4 | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| 1-Methylnaphthalene | 1.3 | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| 2-Methylnaphthalene | 0.68 | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Fluorene | 0.12 | 0.095 | 0.30 | J | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 1:57:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 41.6 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 25.5 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 1:57:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 48.6 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 1:57:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.24 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Cobalt | 0.017 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| Zinc | 0.0056 | 0.0039 | 0.010 | J | mg/L | 1 | 12/12/2022 6:26:20 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:07:55 PM | 71980 |
| Arsenic | 0.016 | 0.00022 | 0.0010 | * | mg/L | 1 | 12/12/2022 3:51:25 PM | 71980 |
| Lead | 0.0054 | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:51:25 PM | 71980 |
| Selenium | 0.0016 | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:51:25 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:31:40 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-12A

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:20:00 AM

Lab ID: 2212442-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.17 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Nickel | 0.0055 | 0.0033 | 0.010 | J | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| Zinc | 0.0080 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 5:08:38 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0010 | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 11:28:13 AM | A93335 |
| Arsenic | 0.015 | 0.00012 | 0.0010 | * | mg/L | 1 | 12/15/2022 11:28:13 AM | A93335 |
| Lead | 0.00065 | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 11:28:13 AM | A93335 |
| Selenium | 0.0020 | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 11:28:13 AM | A93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:41:04 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 26 | 0.45 | 2.5 | | mg/L | 50 | 12/13/2022 7:45:00 PM | R93213 |
| Surr: BFB | 115 | 0 | 70-130 | | %Rec | 50 | 12/13/2022 7:45:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 9600 | 110 | 500 | | µg/L | 500 | 12/16/2022 5:06:09 PM | R93377 |
| Toluene | 42 | 10 | 50 | J | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Ethylbenzene | 1300 | 11 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 20 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Isopropylbenzene | 59 | 9.1 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| n-Propylbenzene | 160 | 9.1 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Xylenes, Total | 130 | 19 | 75 | | µg/L | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 95.4 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 83.2 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Surr: Dibromofluoromethane | 93.5 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:07:28 AM | R93331 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:07:28 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 8:24:24 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 2.8 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 9:51:16 AM | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 9:51:16 AM | 72049 |
| Surr: DNOP | 102 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 9:51:16 AM | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 1-Methylnaphthalene | 41 | 4.3 | 5.0 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 2-Methylnaphthalene | 58 | 4.2 | 5.0 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Naphthalene | 140 | 3.2 | 5.0 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Phenol | 21 | 18 | 20 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: 2-Fluorophenol | 34.2 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: Phenol-d5 | 26.4 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 71.4 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: Nitrobenzene-d5 | 47.8 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 41.2 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 68.3 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 2:35:43 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 1.1 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Acenaphthene | 0.74 | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Fluorene | 1.3 | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Phenanthrene | 1.1 | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Anthracene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 2:40:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 61.1 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 48.9 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 2:40:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 96.5 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 2:40:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 4.9 | 0.0079 | 0.015 | * | mg/L | 5 | 12/13/2022 6:31:14 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Cobalt | 0.013 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Nickel | 0.028 | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:27:58 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:10:21 PM | 71980 |
| Arsenic | 0.0064 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:53:52 PM | 71980 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/12/2022 3:53:52 PM | 71980 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:53:52 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:43:13 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-63

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 10:35:00 AM

Lab ID: 2212442-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 4.8 | 0.0056 | 0.010 | * | mg/L | 5 | 12/22/2022 5:15:23 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Nickel | 0.022 | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| Zinc | 0.0093 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 5:12:58 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/27/2022 12:14:38 PM | A93556 |
| Arsenic | 0.0057 | 0.00061 | 0.0050 | | mg/L | 5 | 12/20/2022 2:02:19 PM | A93438 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 11:39:15 AM | A93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 2:02:19 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 4:45:22 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|--------------|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: CCM | | |
| Gasoline Range Organics (GRO) | 27 | 0.45 | 2.5 | | mg/L | 50 | 12/13/2022 8:05:00 PM | R93213 |
| Surr: BFB | 108 | 0 | 70-130 | | %Rec | 50 | 12/13/2022 8:05:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: JR | | |
| Benzene | 14000 | 110 | 500 | | µg/L | 500 | 12/16/2022 5:34:44 PM | R93377 |
| Toluene | 27 | 10 | 50 | J | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Ethylbenzene | 590 | 11 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 20 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Isopropylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| n-Propylbenzene | 41 | 9.1 | 50 | J | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Xylenes, Total | 79 | 19 | 75 | | µg/L | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 99.2 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 88.3 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:36:23 AM | R93331 |
| Surr: Toluene-d8 | 103 | 0 | 70-130 | | %Rec | 50 | 12/16/2022 6:36:23 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/21/2022 8:54:10 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 5.0 | 0.16 | 0.64 | | mg/L | 10 | 12/16/2022 1:47:49 PM | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.52 | 0.80 | D | mg/L | 10 | 12/16/2022 1:47:49 PM | 72049 |
| Surr: DNOP | 0 | 0 | 15.9-177 | S | %Rec | 10 | 12/16/2022 1:47:49 PM | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 1-Methylnaphthalene | 58 | 4.3 | 5.0 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 2-Methylnaphthalene | 37 | 4.2 | 5.0 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Naphthalene | 81 | 3.2 | 5.0 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Phenol | 89 | 18 | 20 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: 2-Fluorophenol | 34.5 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: Phenol-d5 | 27.5 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 68.9 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: Nitrobenzene-d5 | 46.1 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 35.3 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 76.8 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 3:16:53 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 3.1 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Acenaphthene | 2.5 | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Fluorene | 4.8 | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Phenanthrene | 7.6 | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Anthracene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Fluoranthene | 0.14 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 3:24:00 AM | R93333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 53.9 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Surr: 2-Fluorobiphenyl | 40.3 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 3:24:00 AM | R93333 |
| Surr: 4-Terphenyl-d14 | 88.7 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 3:24:00 AM | R93333 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|-----|------------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 14 | 0.16 | 0.30 | * | mg/L | 100 | 12/13/2022 6:39:09 PM | 71980 |
| Beryllium | 0.0088 | 0.00060 | 0.0020 | * | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Chromium | 0.081 | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Cobalt | 0.058 | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Nickel | 0.094 | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Vanadium | 0.13 | 0.0035 | 0.050 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| Zinc | 0.091 | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:29:20 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:12:46 PM | 71980 |
| Arsenic | 0.020 | 0.00022 | 0.0010 | * | mg/L | 1 | 12/19/2022 2:12:46 PM | 71980 |
| Lead | 0.11 | 0.00097 | 0.0025 | * | mg/L | 5 | 12/21/2022 3:38:46 PM | 71980 |
| Selenium | 0.054 | 0.0044 | 0.0050 | * | mg/L | 5 | 12/21/2022 4:29:15 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00031 | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 12:51:28 PM | 72200 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-57

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 3.6 | 0.0056 | 0.010 | * | mg/L | 5 | 12/22/2022 5:22:28 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Nickel | 0.058 | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Vanadium | 0.0030 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| Zinc | 0.0099 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 5:20:19 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0023 | 0.0022 | 0.0050 | J | mg/L | 5 | 12/27/2022 12:24:52 PM | A93556 |
| Arsenic | 0.0020 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:07:26 PM | A93438 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 11:41:57 AM | A93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 2:07:26 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | 0.00011 | 0.000091 | 0.00020 | J | mg/L | 1 | 12/16/2022 3:30:36 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: CCM | |
| Gasoline Range Organics (GRO) | 0.46 | 0.0090 | 0.050 | | mg/L | 1 | 12/13/2022 8:24:00 PM | R93213 |
| Surr: BFB | 188 | 0 | 70-130 | S | %Rec | 1 | 12/13/2022 8:24:00 PM | R93213 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 4.9 | 0.45 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Ethylbenzene | 20 | 0.43 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Methyl tert-butyl ether (MTBE) | ND | 0.79 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,2,4-Trimethylbenzene | 33 | 0.24 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,3,5-Trimethylbenzene | 1.7 | 0.36 | 2.0 | J | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.51 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| cis-1,2-DCE | ND | 0.78 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,1-Dichloroethane | ND | 0.55 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,1-Dichloroethene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Isopropylbenzene | 5.3 | 0.37 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 4-Isopropyltoluene | 1.0 | 0.40 | 2.0 | J | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| n-Propylbenzene | 2.3 | 0.36 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| sec-Butylbenzene | 2.0 | 0.29 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Xylenes, Total | 2.4 | 0.74 | 3.0 | J | µg/L | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 94.3 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Surr: 4-Bromofluorobenzene | 95.0 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Surr: Dibromofluoromethane | 88.0 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 6:21:01 PM | R93479 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 6:21:01 PM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 9:24:03 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|------------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.50 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 10:38:28 AM | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 10:38:28 AM | 72049 |
| Surr: DNOP | 107 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 10:38:28 AM | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: 2-Fluorophenol | 33.3 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: Phenol-d5 | 25.4 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 71.7 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: Nitrobenzene-d5 | 47.5 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 39.1 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 74.3 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 3:57:44 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Naphthalene | 1.2 | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| 1-Methylnaphthalene | 0.92 | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Acenaphthene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Fluorene | 0.28 | 0.095 | 0.30 | J | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Phenanthrene | 0.52 | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Fluoranthene | 0.58 | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Pyrene | 0.46 | 0.32 | 1.0 | J | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 4:08:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.9 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 44.4 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 4:08:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 87.5 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 4:08:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.31 | 0.0016 | 0.0030 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Vanadium | 0.0056 | 0.0035 | 0.050 | J | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/12/2022 6:36:48 PM | 71980 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 2:15:13 PM | 71980 |
| Arsenic | 0.0022 | 0.00022 | 0.0010 | | mg/L | 1 | 12/12/2022 3:58:45 PM | 71980 |
| Lead | 0.00032 | 0.00019 | 0.00050 | J | mg/L | 1 | 12/12/2022 3:58:45 PM | 71980 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/12/2022 3:58:45 PM | 71980 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 3:32:46 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022

Lab ID: 2212442-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|------------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.30 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Vanadium | 0.0052 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| Zinc | 0.016 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:24:22 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/27/2022 12:40:14 PM | A93556 |
| Arsenic | 0.0019 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:12:33 PM | A93438 |
| Lead | 0.000060 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 11:44:38 AM | A93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/20/2022 2:12:33 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/16/2022 3:41:22 PM | 72128 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-008A

Matrix: Aqueous

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|-----|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-7-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/7/2022 11:05:00 AM

Lab ID: 2212442-008A

Matrix: Aqueous

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 97.5 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Surr: Dibromofluoromethane | 108 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 7:33:24 AM | R93331 |
| Surr: Toluene-d8 | 104 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 7:33:24 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212442-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|-----|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2-Dibromoethane (EDB) | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Naphthalene | ND | 0.50 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1-Methylnaphthalene | ND | 0.84 | 4.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 2-Methylnaphthalene | ND | 0.69 | 4.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Bromobenzene | ND | 0.28 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Bromodichloromethane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Bromoform | ND | 0.31 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Carbon Tetrachloride | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Chloroethane | ND | 0.38 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 2-Chlorotoluene | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 4-Chlorotoluene | ND | 0.34 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| cis-1,3-Dichloropropene | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2-Dibromo-3-chloropropane | ND | 0.59 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Dibromochloromethane | ND | 0.28 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Dibromomethane | ND | 0.31 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2-Dichlorobenzene | ND | 0.15 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,3-Dichlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,4-Dichlorobenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Dichlorodifluoromethane | ND | 0.40 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2-Dichloropropane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,3-Dichloropropane | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 2,2-Dichloropropane | ND | 0.26 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1-Dichloropropene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212442-010A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Hexachlorobutadiene | ND | 0.56 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 2-Hexanone | ND | 1.8 | 10 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 4-Methyl-2-pentanone | ND | 0.88 | 10 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| tert-Butylbenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1,1,2-Tetrachloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1,2,2-Tetrachloroethane | ND | 0.27 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| trans-1,2-DCE | ND | 0.19 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| trans-1,3-Dichloropropene | ND | 0.34 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2,3-Trichlorobenzene | ND | 0.25 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2,4-Trichlorobenzene | ND | 0.24 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,1,2-Trichloroethane | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Trichlorofluoromethane | ND | 0.16 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| 1,2,3-Trichloropropane | ND | 0.44 | 2.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Surr: 1,2-Dichloroethane-d4 | 108 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Surr: 4-Bromofluorobenzene | 99.7 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 8:02:00 AM | R93331 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 12/16/2022 8:02:00 AM | R93331 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212442

Date Reported: 1/17/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212442-010B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/21/2022 9:52:08 AM | 72189 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



ANALYTICAL REPORT

December 19, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1567062

Samples Received: 12/13/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | | |
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2212442-001F EB-12-7-22 L1567062-01 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:43 | JCS | Mt. Juliet, TN |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2212442-002F OW-64 L1567062-02 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:46 | JCS | Mt. Juliet, TN |

2212442-003F OW-12 L1567062-03 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:49 | JCS | Mt. Juliet, TN |

2212442-004F OW-12A L1567062-04 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:50 | JCS | Mt. Juliet, TN |

2212442-005F OW-63 L1567062-05 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:52 | JCS | Mt. Juliet, TN |

2212442-006F OW-57 L1567062-06 GW

Collected by
Collected date/time
Received date/time

12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:53 | JCS | Mt. Juliet, TN |

2212442-007F DUP-12-7-22 L1567062-07 GW

Collected by
Collected date/time
Received date/time

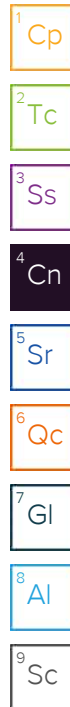
12/07/22 09:30 12/13/22 09:00

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:54 | JCS | Mt. Juliet, TN |

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:43 | WG1974296 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:46 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:49 | WG1974296 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|-----------|
| Cyanide | ND | P1 | 0.00500 | 1 | 12/19/2022 16:50 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:52 | WG1974296 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:53 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:54 | WG1974296 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

[L1567062-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3873576-1 12/19/22 16:37

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1566638-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1566638-01 12/19/22 16:41 • (DUP) R3873576-3 12/19/22 16:42

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1567062-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1567062-04 12/19/22 16:50 • (DUP) R3873576-6 12/19/22 16:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3873576-2 12/19/22 16:38

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0951 | 95.1 | 87.1-120 | |

L1567062-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1567062-01 12/19/22 16:43 • (MS) R3873576-4 12/19/22 16:44 • (MSD) R3873576-5 12/19/22 16:45

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0923 | 0.0923 | 92.3 | 92.3 | 1 | 90.0-110 | | | 0.000 | 20 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

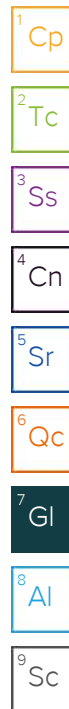
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

Qualifier Description

| | |
|----|---|
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
|----|---|



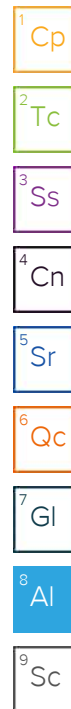
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Page 4248 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

B100

L156 7062

| | | | | | | | |
|--|--|------------------|--|-----------------------|--|---------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | EMAIL: | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|-----------------------|--------------|------------------------------|
| 1 | 2212442-001F | EB-12-7-22 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 9:30:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2212442-002F | OW-64 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 9:40:00 AM | 1 | Total Cyanide J and MDL - 02 |
| 3 | 2212442-003F | OW-12 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 10:05:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2212442-004F | OW-12A | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 10:20:00 AM | 1 | Total Cyanide J and MDL - 04 |
| 5 | 2212442-005F | OW-63 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 10:35:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2212442-006F | OW-57 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 11:05:00 AM | 1 | Total Cyanide J and MDL - 06 |
| 7 | 2212442-007F | DUP-12-7-22 | 500AMBHDP
F-NAOH | Groundw
ater | 12/7/2022 | 1 | Total Cyanide J and MDL - 07 |

Sample Receipt Checklist
 DOC Seal Present/Intact: ☒ Y ☐ N If Applicable
 DOC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | |
|--|------------------|---------------|--------------|----------------|------------|--|
| Relinquished By: | Date: 12/12/2022 | Time: 2:56 PM | Received By: | Date: 12/13/22 | Time: 0900 | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples <u>5.5</u> °C Attempt to Cool? _____

Comments: _____ |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | |



January 16, 2023

**Enthalpy Analytical - El Dorado Hills
Work Order No. 2212123**

Mr. Andy Freeman
Hall Environmental Analytical Laboratory
4901 Hawkins NE
Albuquerque, NM 87109

Dear Mr. Freeman,

Enclosed are the results for the sample set received at Enthalpy Analytical - EDH on December 13, 2022 under your Project Name '2212442'.

Enthalpy Analytical - EDH is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at karen.volpendesta@enthalpy.com.

Thank you for choosing Enthalpy Analytical - EDH as part of your analytical support team.

Sincerely,

For

Karen L. Volpendesta
Project Manager



Enthalpy Analytical -EDH certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Enthalpy Analytical -EDH .

Enthalpy Analytical - EDH Work Order No. 2212123**Case Narrative****Sample Condition on Receipt:**

One groundwater sample and one aqueous sample were received and stored securely in accordance with Enthalpy Analytical - EDH standard operating procedures and EPA methodology. The samples were received in good condition and within the recommended temperature requirements. The backup bottles for the samples were received broken.

Analytical Notes:**PFAS Isotope Dilution Method**

The samples were extracted and analyzed for a selected list of PFAS using Enthalpy Analytical - EDH's PFAS Isotope Dilution Method. The results for PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Results for all other analytes include the linear isomers only.

Holding Times

The samples were extracted and analyzed within the hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above the Reporting Limit. The OPR recoveries were within the method acceptance criteria.

The labeled standard recoveries for all QC and field samples were within the acceptance criteria.

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| Sample Receipt..... | 16 |



Sample Inventory Report

| Sample ID | Client Sample ID | Sampled | Received | Components/Containers |
|------------|------------------|-----------------|-----------------|-----------------------|
| 2212123-01 | OW-63 | 07-Dec-22 10:35 | 13-Dec-22 09:01 | HDPE Bottle, 250 mL |
| | | | | HDPE Bottle, 250 mL |
| 2212123-02 | EB-OW-67 | 07-Dec-22 10:35 | 13-Dec-22 09:01 | HDPE Bottle, 250 mL |
| | | | | HDPE Bottle, 250 mL |

ANALYTICAL RESULTS

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | |
|-------------------------|--|--------------|----------|-------------|------------------------------|-----------|-----------|-----------------|----------|
| Client Data | | | | | Laboratory Data | | | | |
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22L133-BLK1 | Column: | BEH C18 | | |
| Project: | 2212442 | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:16 | 1 |
| PFPeA | 2706-90-3 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFBS | 375-73-5 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 4:2 FTS | 757124-72-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFHxA | 307-24-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFPeS | 2706-91-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFHpA | 375-85-9 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFHxS | 355-46-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 6:2 FTS | 27619-97-2 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFOA | 335-67-1 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFHpS | 375-92-8 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFNA | 375-95-1 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFOSA | 754-91-6 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFOS | 1763-23-1 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFDA | 335-76-2 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 8:2 FTS | 39108-34-4 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:16 | 1 |
| PFNS | 68259-12-1 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| MeFOSAA | 2355-31-9 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| EtFOSAA | 2991-50-6 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFUnA | 2058-94-8 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFDS | 335-77-3 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFDoA | 307-55-1 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFTTrDA | 72629-94-8 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| PFTeDA | 376-06-7 | ND | 2.00 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | 51.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:16 | 1 |
| 13C3-PFPeA | IS | 64.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C3-PFBS | IS | 67.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C2-4:2 FTS | IS | 62.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C2-PFHxA | IS | 61.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C4-PFHpA | IS | 57.3 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C3-PFHxS | IS | 66.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C2-6:2 FTS | IS | 62.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C2-PFOA | IS | 64.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C5-PFNA | IS | 61.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C8-PFOSA | IS | 37.7 | 10 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C8-PFOS | IS | 63.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |
| 13C2-PFDA | IS | 56.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 |

| Sample ID: Method Blank | | | | | PFAS Isotope Dilution Method | | | | | |
|--|------|------------|----------|------------|--|-----------|-----------|-----------------|----------|--|
| <div>Client Data</div> <div>Name: Hall Environmental Analytical Laboratory
Project: 2212442</div> <div>Matrix: Aqueous</div> | | | | | <div>Laboratory Data</div> <div>Lab Sample: B22L133-BLK1
Column: BEH C18</div> | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-8:2 FTS | IS | 70.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:16 | 1 | |
| d3-MeFOSAA | IS | 62.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 | |
| d5-EtFOSAA | IS | 62.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 | |
| 13C2-PFUnA | IS | 58.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 | |
| 13C2-PFDoA | IS | 48.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 | |
| 13C2-PFTeDA | IS | 52.6 | 20 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:49 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | | | Laboratory Data | | | | | |
|-------------------|--|------------------|-----------|---------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | | | Matrix: | Aqueous | Lab Sample: | B22L133-BS1 | Column: | BEH C18 | | |
| Project: | 2212442 | | | | | | | | | | |
| Analyte | CAS Number | Amt Found (ng/L) | Spike Amt | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| PFBA | 375-22-4 | 36.6 | 40.0 | 91.5 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:27 | 1 |
| PFPeA | 2706-90-3 | 35.3 | 40.0 | 88.2 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFBS | 375-73-5 | 34.2 | 40.4 | 84.7 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 4:2 FTS | 757124-72-4 | 39.3 | 40.0 | 98.3 | 60 - 145 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFHxA | 307-24-4 | 33.5 | 40.0 | 83.6 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFPeS | 2706-91-4 | 30.6 | 40.4 | 75.7 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFHpA | 375-85-9 | 35.8 | 40.0 | 89.4 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFHxS | 355-46-4 | 38.0 | 40.0 | 94.9 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 6:2 FTS | 27619-97-2 | 34.0 | 40.0 | 84.9 | 60 - 140 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFOA | 335-67-1 | 35.1 | 40.0 | 87.9 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFHpS | 375-92-8 | 36.8 | 40.0 | 91.9 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFNA | 375-95-1 | 35.8 | 40.0 | 89.5 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFOSA | 754-91-6 | 35.4 | 40.0 | 88.6 | 65 - 140 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFOS | 1763-23-1 | 32.1 | 40.0 | 80.3 | 65 - 140 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFDA | 335-76-2 | 33.3 | 40.0 | 83.2 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 8:2 FTS | 39108-34-4 | 35.5 | 40.0 | 88.7 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:27 | 1 |
| PFNS | 68259-12-1 | 32.4 | 40.0 | 81.0 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| MeFOSAA | 2355-31-9 | 33.4 | 40.0 | 83.5 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| EtFOSAA | 2991-50-6 | 34.3 | 40.0 | 85.6 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFUnA | 2058-94-8 | 34.9 | 40.0 | 87.2 | 65 - 140 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFDS | 335-77-3 | 35.3 | 40.0 | 88.3 | 50 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFDoA | 307-55-1 | 37.4 | 40.0 | 93.4 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFTTrDA | 72629-94-8 | 38.0 | 40.0 | 95.0 | 60 - 140 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| PFTeDA | 376-06-7 | 36.7 | 40.0 | 91.7 | 65 - 135 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| Labeled Standards | Type | | | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C3-PFBA | IS | | | 50.1 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:27 | 1 |
| 13C3-PFPeA | IS | | | 67.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C3-PFBS | IS | | | 74.4 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-4:2 FTS | IS | | | 65.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFHxA | IS | | | 67.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C4-PFHpA | IS | | | 65.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C3-PFHxS | IS | | | 68.4 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-6:2 FTS | IS | | | 64.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFOA | IS | | | 67.3 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C5-PFNA | IS | | | 62.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |

Sample ID: OPR**PFAS Isotope Dilution Method**

| Client Data | | | | Laboratory Data | | | | | |
|-------------------|--|---------|----------|-----------------|-------------|-----------|-----------|-----------------|----------|
| Name: | Hall Environmental Analytical Laboratory | Matrix: | Aqueous | Lab Sample: | B22L133-BS1 | Column: | BEH C18 | | |
| Project: | 2212442 | | | | | | | | |
| Labeled Standards | Type | % Rec | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution |
| 13C8-PFOSA | IS | 41.4 | 10 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C8-PFOS | IS | 62.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFDA | IS | 58.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-8:2 FTS | IS | 72.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 10-Jan-23 16:27 | 1 |
| d3-MeFOSAA | IS | 60.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| d5-EtFOSAA | IS | 60.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFUnA | IS | 54.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFDoA | IS | 49.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |
| 13C2-PFTeDA | IS | 55.3 | 20 - 150 | | B22L133 | 21-Dec-22 | 0.250 L | 12-Jan-23 09:59 | 1 |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | | |
|-------------------|--|--------------|-----------------|-----------------|------------------------------|----------------|-----------------|-----------------|----------|---------|--|
| Client Data | | | | Laboratory Data | | | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Groundwater | | Lab Sample: | 2212123-01 | | Column: | BEH C18 | |
| Project: | 2212442 | | Date Collected: | 07-Dec-22 10:35 | | Date Received: | 13-Dec-22 09:01 | | | | |
| Location: | 2212442-005G | | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | | |
| PFBA | 375-22-4 | 140 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 10-Jan-23 16:58 | 1 | | |
| PFPeA | 2706-90-3 | 505 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFBS | 375-73-5 | 34.9 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 4:2 FTS | 757124-72-4 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFHxA | 307-24-4 | 344 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFPeS | 2706-91-4 | 34.4 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFHpA | 375-85-9 | 124 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFHxS | 355-46-4 | 258 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 6:2 FTS | 27619-97-2 | 562 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFOA | 335-67-1 | 106 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFHpS | 375-92-8 | 7.25 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFNA | 375-95-1 | 479 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFOSA | 754-91-6 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFOS | 1763-23-1 | 331 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFDA | 335-76-2 | 12.1 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 8:2 FTS | 39108-34-4 | 70.1 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 10-Jan-23 16:58 | 1 | | |
| PFNS | 68259-12-1 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| MeFOSAA | 2355-31-9 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| EtFOSAA | 2991-50-6 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFUnA | 2058-94-8 | 76.8 | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFDS | 335-77-3 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFDoA | 307-55-1 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFTTrDA | 72629-94-8 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| PFTeDA | 376-06-7 | ND | 2.03 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | | |
| 13C3-PFBA | IS | 35.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 10-Jan-23 16:58 | 1 | | |
| 13C3-PFPeA | IS | 61.4 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C3-PFBS | IS | 79.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C2-4:2 FTS | IS | 78.1 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C2-PFHxA | IS | 67.3 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C4-PFHpA | IS | 63.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C3-PFHxS | IS | 72.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C2-6:2 FTS | IS | 69.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C2-PFOA | IS | 67.3 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C5-PFNA | IS | 61.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C8-PFOSA | IS | 42.2 | 10 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |
| 13C8-PFOS | IS | 63.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | | |

| Sample ID: OW-63 | | | | | PFAS Isotope Dilution Method | | | | | |
|-------------------|--|------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Groundwater | Lab Sample: | 2212123-01 | | Column: | BEH C18 | |
| Project: | 2212442 | | Date Collected: | 07-Dec-22 10:35 | Date Received: | 13-Dec-22 09:01 | | | | |
| Location: | 2212442-005G | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-PFDA | IS | 58.7 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |
| 13C2-8:2 FTS | IS | 74.1 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 10-Jan-23 16:58 | 1 | |
| d3-MeFOSAA | IS | 60.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |
| d5-EtFOSAA | IS | 61.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |
| 13C2-PFUnA | IS | 61.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |
| 13C2-PFDoA | IS | 54.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |
| 13C2-PFTeDA | IS | 58.7 | 20 - 150 | | B22L133 | 21-Dec-22 | 0.246 L | 12-Jan-23 10:30 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

| Sample ID: EB-OW-67 | | | | | PFAS Isotope Dilution Method | | | | | |
|---------------------|--|--------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | | Laboratory Data | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2212123-02 | | Column: | BEH C18 | |
| Project: | 2212442 | | Date Collected: | 07-Dec-22 10:35 | Date Received: | 13-Dec-22 09:01 | | | | |
| Location: | 2212442-009A | | | | | | | | | |
| Analyte | CAS Number | Conc. (ng/L) | RL | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| PFBA | 375-22-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 10-Jan-23 17:08 | 1 | |
| PFPeA | 2706-90-3 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFBS | 375-73-5 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 4:2 FTS | 757124-72-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFHxA | 307-24-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFPeS | 2706-91-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFHpA | 375-85-9 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFHxS | 355-46-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 6:2 FTS | 27619-97-2 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFOA | 335-67-1 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFHpS | 375-92-8 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFNA | 375-95-1 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFOSA | 754-91-6 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFOS | 1763-23-1 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFDA | 335-76-2 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 8:2 FTS | 39108-34-4 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 10-Jan-23 17:08 | 1 | |
| PFNS | 68259-12-1 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| MeFOSAA | 2355-31-9 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| EtFOSAA | 2991-50-6 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFUnA | 2058-94-8 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFDS | 335-77-3 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFDoA | 307-55-1 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFTTrDA | 72629-94-8 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| PFTeDA | 376-06-7 | ND | 1.94 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C3-PFBA | IS | 70.3 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 10-Jan-23 17:08 | 1 | |
| 13C3-PFPeA | IS | 61.7 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C3-PFBS | IS | 75.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-4:2 FTS | IS | 59.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-PFHxA | IS | 65.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C4-PFHpA | IS | 59.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C3-PFHxS | IS | 61.9 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-6:2 FTS | IS | 63.4 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-PFOA | IS | 67.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C5-PFNA | IS | 63.5 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C8-PFOSA | IS | 30.2 | 10 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C8-PFOS | IS | 58.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |

| Sample ID: EB-OW-67 | | | | | PFAS Isotope Dilution Method | | | | | |
|---------------------|--|------------|-----------------|-----------------|------------------------------|-----------------|-----------|-----------------|----------|--|
| Client Data | | | | Laboratory Data | | | | | | |
| Name: | Hall Environmental Analytical Laboratory | | Matrix: | Aqueous | Lab Sample: | 2212123-02 | | Column: | BEH C18 | |
| Project: | 2212442 | | Date Collected: | 07-Dec-22 10:35 | Date Received: | 13-Dec-22 09:01 | | | | |
| Location: | 2212442-009A | | | | | | | | | |
| Labeled Standards | Type | % Recovery | Limits | Qualifiers | Batch | Extracted | Samp Size | Analyzed | Dilution | |
| 13C2-PFDA | IS | 56.7 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-8:2 FTS | IS | 72.2 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 10-Jan-23 17:08 | 1 | |
| d3-MeFOSAA | IS | 56.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| d5-EtFOSAA | IS | 56.8 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-PFUnA | IS | 58.0 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-PFDoA | IS | 52.6 | 25 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |
| 13C2-PFTeDA | IS | 55.7 | 20 - 150 | | B22L133 | 21-Dec-22 | 0.258 L | 12-Jan-23 10:41 | 1 | |

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

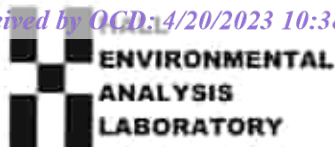
| | |
|---------|--|
| B | This compound was also detected in the method blank |
| Conc. | Concentration |
| CRS | Cleanup Recovery Standard |
| D | Dilution |
| DL | Detection Limit |
| E | The associated compound concentration exceeded the calibration range of the instrument |
| H | Recovery and/or RPD was outside laboratory acceptance limits |
| I | Chemical Interference |
| IS | Internal Standard |
| J | The amount detected is below the Reporting Limit/LOQ |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| M | Estimated Maximum Possible Concentration (CA Region 2 projects only) |
| MDL | Method Detection Limit |
| NA | Not applicable |
| ND | Not Detected |
| OPR | Ongoing Precision and Recovery sample |
| P | The reported concentration may include contribution from chlorinated diphenyl ether(s). |
| Q | The ion transition ratio is outside of the acceptance criteria. |
| RL | Reporting Limit |
| RL | For 537.1, the reported RLs are the MRLs. |
| TEQ | Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations. |
| TEQMax | TEQ calculation that uses the detection limit as the concentration for non-detects |
| TEQMin | TEQ calculation that uses zero as the concentration for non-detects |
| TEQRisk | TEQ calculation that uses ½ the detection limit as the concentration for non-detects |
| U | Not Detected (specific projects only) |
| * | See Cover Letter |

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Enthalpy Analytical Laboratory Certifications

| Accrediting Authority | Certificate Number |
|--|---------------------------|
| Alaska Department of Environmental Conservation | 17-013 |
| Arkansas Department of Environmental Quality | 21-023-0 |
| California Department of Health – ELAP | 2892 |
| DoD ELAP - A2LA Accredited - ISO/IEC 17025 | 3091.01 |
| Florida Department of Health | E87777 |
| Hawaii Department of Health | N/A |
| Louisiana Department of Environmental Quality | 01977 |
| Maine Department of Health | 2020018 |
| Massachusetts Department of Environmental Protection | M-CA413 |
| Michigan Department of Environmental Quality | 9932 |
| Minnesota Department of Health | 2211390 |
| New Hampshire Environmental Accreditation Program | 207721 |
| New Jersey Department of Environmental Protection | CA003 |
| New York Department of Health | 11411 |
| Ohio Environmental Protection Agency | 87778 |
| Oregon Laboratory Accreditation Program | 4042-021 |
| Texas Commission on Environmental Quality | T104704189-22-13 |
| Vermont Department of Health | VT-4042 |
| Virginia Department of General Services | 11276 |
| Washington Department of Ecology | C584 |
| Wisconsin Department of Natural Resources | 998036160 |

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.



CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

Hall Environmental Analysis Laboratory Page 4265 of 5177

 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107

Website: www.hallenvironmental.com

2212123 0-8°C

| | | | | | | | |
|--|--|---|--|------------------------------|--|--------|--|
| SUB CONTRACTOR: Vista Analytical Labor | | COMPANY: Vista Analytical Laboratory | | PHONE: (916) 673-1520 | | FAX: | |
| ADDRESS: 1104 Windfield Way | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: El Dorado Hills, CA 95762 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|-------------|---------|-----------------------|--------------|----------------------|
| 1 | 2212442-005G | OW-63 | 250HOPE | Groundw | 12/7/2022 10:35:00 AM | 2 | 537 UCMR 3 J and MDL |
| 2 | 2212442-009A | EB-OW-67 | 250HOPE | Aqueous | 12/7/2022 10:35:00 AM | 2 | 537 UCMR 3 J and MDL |

SPECIAL INSTRUCTIONS / COMMENTS:

| | | | | | | | |
|-------------------------------|--|--|----------------------|----------------------------------|---------------------------------|---------------------------------|----------------------|
| | | | | | | | |
| Relinquished By: <u>SEA</u> | | Date: <u>12/12/22</u> | Time: <u>2:58 PM</u> | Received By: <u>FedEx</u> | | Date: <u>12/12/22</u> | Time: <u>2:58 PM</u> |
| Relinquished By: <u>FedEx</u> | | Date: <u>12/13/22</u> | Time: <u>0901</u> | Received By: <u>Byron Clark</u> | | Date: <u>12/13/22</u> | Time: <u>0901</u> |
| Relinquished By: | | Date: | Time: | Received By: | | Date: | Time: |
| TAT: | | Standard ☒ | RI/SH | Next BD ☐ | 2nd BD ☐ | 3rd BD ☐ | |

| | |
|--|---|
| REPORT TRANSMITTAL DESIRED: | |
| ☐ HARDCOPY (extra cost) | ☐ FAX ☐ EMAIL ☐ ONLINE |
| FOR LAB USE ONLY: | |
| Temp of samples _____ °C | Attempt to Cool? _____ |
| Comments: _____ | |



Sample Log-In Checklist

Page # 1 of 1Vista Work Order #: 2212123 TAT SLC

| | | | |
|-----------------------------------|--|-------------------------|---|
| Samples Arrival: | Date/Time
<u>09:01</u>
<u>12/13/22</u> | Initials:
<u>BAC</u> | Location: <u>WR-2</u>
Shelf/Rack: <u>N/A</u> |
| Delivered By: | <u>FedEx</u> | UPS | On Trac |
| | GLS | DHL | Hand Delivered |
| | Other | | |
| Preservation: | Ice | <u>Blue Ice</u> | Techni Ice |
| | | Dry Ice | None |
| Temp °C: <u>1.0</u> (uncorrected) | Probe used: Y / <u>N</u> | | Thermometer ID: <u>IR-4</u> |
| Temp °C: <u>0.8</u> (corrected) | | | |

| | YES | NO | NA |
|---|-------------------------------------|-------------------------|---|
| Shipping Container(s) Intact? | ☒ | | |
| Shipping Custody Seals Intact? | ☒ | | |
| Airbill | ☒ | | |
| Trk # <u>770753474608</u> | | | |
| Shipping Documentation Present? | ☒ | | |
| Shipping Container | <u>Vista</u> | Client | <u>Retain</u> |
| | Return | Dispose | |
| Chain of Custody / Sample Documentation Present? | ☒ | | |
| Chain of Custody / Sample Documentation Complete? | ☒ | | |
| Holding Time Acceptable? | ☒ | | |
| Logged In: | Date/Time
<u>12/14/22 10:56</u> | Initials:
<u>162</u> | Location: <u>R-13, WR2</u>
Shelf/Rack: <u>A-2, F-4</u> |
| COC Anomaly/Sample Acceptance Form completed? | | | |

Comments:

CoC/Label Reconciliation Report WO# 2212123

| Lab Number | CoC Sample ID | Sample Alias | Sample Date/Time | Container | Base Matrix | Sample Comments |
|------------|---------------|--------------|------------------|---------------------|-------------|-----------------|
| 2212123-01 | A OW-63 | 2212442-005G | 07-Dec-22 10:35 | HDPE Bottle, 250 mL | Aqueous | |
| 2212123-01 | B OW-63 | 2212442-005G | 07-Dec-22 10:35 | HDPE Bottle, 250 mL | Aqueous | |
| 2212123-02 | A EB-OW-67 | 2212442-009A | 07-Dec-22 10:35 | HDPE Bottle, 250 mL | Aqueous | |
| 2212123-02 | B EB-OW-67 | 2212442-009A | 07-Dec-22 10:35 | HDPE Bottle, 250 mL | Aqueous | |

Checkmarks indicate that information on the CoC reconciled with the sample label.

Any discrepancies are noted in the following columns.

| | Yes | No | NA |
|---|-----|----|----|
| Sample Container Intact? | ✓ | | |
| Sample Custody Seals Intact? | | | ✓ |
| Adequate Sample Volume? | ✓ | | |
| Container Type Appropriate for Analysis(es) | ✓ | | |

Comments: ① Samples received broken.
① No backing volume.

Preservation Documented: Na2S2O3 (Trizma 75) NH4CH3CO2 None Other

Verified by/Date: 1/6 12/14/22

Rev. Date: 09/14/2021
Rev. No: 1

ANOMALY FORM ID: SR-AF



ANOMALY FORM

Vista Work Order

2212123

Initial/Date The following checked issues were noted during sample receipt and login:

- _____ ☐ 1. The samples were received out of temperature at (W-PHT): _____
Was Ice present: Yes No Melted Blue Ice
- _____ ☐ 2. The Chain-of-Custody (CoC) was not relinquished properly.
- _____ ☐ 3. The CoC did not include collection time(s). 00:00 will be used unless notified otherwise.
- _____ ☐ 4. The sample(s) did not include a sample collection time. All or Sample Name: _____
- _____ ☐ 5. A sample ID discrepancy was found. See the Reconciliation report.
The CoC Sample ID will be used unless notified otherwise.
- _____ ☐ 6. A sample date and/or time discrepancy was found. See the Reconciliation report.
The CoC Sample date/time will be used unless notified otherwise.
- _____ ☐ 7. The CoC did not include a sample matrix. The following sample matrix will be used: _____
- _____ ☐ 8. Insufficient volume received for analysis. All or Sample Name: _____
- 12/14/22 ☒ 9. The backup bottle was received broken. Sample Name: OW-63, EO-OW-63
- _____ ☐ 10. CoC not received, illegible or destroyed.
- _____ ☐ 11. The sample(s) were received out of holding time. All or Sample Name: _____
- _____ ☐ 12. The CoC did not include an analysis. All or Sample Name: _____
- _____ ☐ 13. Sample(s) received without collection date. All or Sample Name: _____
- _____ ☐ 14. Sample(s) not received. All or Sample Name: _____
- _____ ☐ 15. Sample(s) received broken. All or Sample Name: _____
- _____ ☐ 16. An incorrect container-type was used. All or Sample Name: _____
- _____ ☐ 17. The Field Reagent Blank (FRB) preservative was from a different lot than the field samples.
Will proceed with analysis and narrate unless notified otherwise.
- _____ ☐ 18. Other: _____

Bolded items require sign-off

Client Contacted: Andy Freeman

Date of Contact: 12/14/2022

Vista Client Manager: Karen Volpendesta

Resolution:

Client notified that backup bottles were received broken.

ID: SR-AF

Rev.: 0 Rev. Date: 11/08/2019

Page: 1 of 1

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-71980 | SampType: MBLK | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: PBW | Batch ID: 71980 | | RunNo: 93212 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3358956 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | 0.0048 | 0.0060 | | | | | | | | J |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-71980 | SampType: LCSLL | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: 71980 | | RunNo: 93212 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3358957 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0023 | 0.0030 | 0.002000 | 0 | 115 | 50 | 150 | | | J |
| Beryllium | 0.0019 | 0.0020 | 0.002000 | 0 | 94.3 | 50 | 150 | | | J |
| Cadmium | 0.0024 | 0.0020 | 0.002000 | 0 | 118 | 50 | 150 | | | |
| Chromium | 0.0061 | 0.0060 | 0.006000 | 0 | 102 | 50 | 150 | | | |
| Cobalt | 0.0034 | 0.0060 | 0.006000 | 0 | 57.1 | 50 | 150 | | | J |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.7 | 50 | 150 | | | J |
| Silver | 0.0041 | 0.0050 | 0.005000 | 0 | 81.9 | 50 | 150 | | | J |
| Vanadium | 0.0091 | 0.050 | 0.01000 | 0 | 90.8 | 50 | 150 | | | J |
| Zinc | 0.0099 | 0.010 | 0.01000 | 0 | 98.6 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-71980 | SampType: LCS | | TestCode: EPA Method 200.7: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 71980 | | RunNo: 93212 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3358958 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 99.7 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.4 | 85 | 115 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.7 | 85 | 115 | | | |
| Cobalt | 0.49 | 0.0060 | 0.5000 | 0 | 98.5 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.8 | 85 | 115 | | | |
| Silver | 0.092 | 0.0050 | 0.1000 | 0 | 91.6 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 101 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: 2212442-001DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: EB-12-7-22 | Batch ID: 71980 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | SeqNo: 3359060 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 70 | 130 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.0 | 70 | 130 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.9 | 70 | 130 | | | |
| Cobalt | 0.52 | 0.0060 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 96.9 | 70 | 130 | | | |
| Silver | 0.094 | 0.0050 | 0.1000 | 0 | 94.1 | 70 | 130 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 103 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 70 | 130 | | | |

| Sample ID: 2212442-001DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|-----------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|-------|----------|------|
| Client ID: EB-12-7-22 | Batch ID: 71980 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | SeqNo: 3359061 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.50 | 0.0030 | 0.5000 | 0 | 101 | 70 | 130 | 1.55 | 20 | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 0.739 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.3 | 70 | 130 | 1.75 | 20 | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 95.5 | 70 | 130 | 2.44 | 20 | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.5 | 70 | 130 | 3.64 | 20 | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0 | 95.3 | 70 | 130 | 1.73 | 20 | |
| Silver | 0.093 | 0.0050 | 0.1000 | 0 | 92.5 | 70 | 130 | 1.68 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 104 | 70 | 130 | 0.785 | 20 | |
| Zinc | 0.50 | 0.010 | 0.5000 | 0 | 99.3 | 70 | 130 | 3.18 | 20 | |

| Sample ID: 2212442-002DMS | SampType: MS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
|----------------------------------|----------------------------------|---|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: OW-64 | Batch ID: 71980 | RunNo: 93212 | | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | SeqNo: 3359063 | Units: mg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.80 | 0.0030 | 0.5000 | 0.2993 | 101 | 70 | 130 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.7 | 70 | 130 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0 | 96.5 | 70 | 130 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 101 | 70 | 130 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.8 | 70 | 130 | | | |
| Silver | 0.095 | 0.0050 | 0.1000 | 0 | 94.7 | 70 | 130 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0.005841 | 102 | 70 | 130 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 103 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2212442-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: OW-64 | | Batch ID: 71980 | | RunNo: 93212 | | | | | | |
| Prep Date: 12/9/2022 | | Analysis Date: 12/12/2022 | | SeqNo: 3359064 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.81 | 0.0030 | 0.5000 | 0.2993 | 101 | 70 | 130 | 0.253 | 20 | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 103 | 70 | 130 | 1.26 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 95.1 | 70 | 130 | 0.379 | 20 | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 97.3 | 70 | 130 | 0.831 | 20 | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | 0.554 | 20 | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.4 | 70 | 130 | 0.700 | 20 | |
| Silver | 0.095 | 0.0050 | 0.1000 | 0 | 94.9 | 70 | 130 | 0.194 | 20 | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0.005841 | 102 | 70 | 130 | 0.241 | 20 | |
| Zinc | 0.52 | 0.010 | 0.5000 | 0 | 103 | 70 | 130 | 0.119 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: B93514 | | RunNo: 93514 | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | | SeqNo: 3373357 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0013 | 0.0020 | | | | | | | | J |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-B | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: B93514 | | RunNo: 93514 | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | | SeqNo: 3373358 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.8 | 50 | 150 | | | J |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 83.5 | 50 | 150 | | | J |
| Chromium | 0.0057 | 0.0060 | 0.006000 | 0 | 95.6 | 50 | 150 | | | J |
| Cobalt | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 80.5 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 93.9 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 94.4 | 50 | 150 | | | J |
| Zinc | 0.0094 | 0.010 | 0.01000 | 0 | 93.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: B93514 | | RunNo: 93514 | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | | SeqNo: 3373359 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------|--------|---------------------------|-----------|-------------|-----------------------------|----------|-------------|------|----------|------|
| Sample ID: MB-71980 | | SampType: MBLK | | | TestCode: EPA 200.8: Metals | | | | | |
| Client ID: PBW | | Batch ID: 71980 | | | RunNo: 93211 | | | | | |
| Prep Date: 12/9/2022 | | Analysis Date: 12/12/2022 | | | SeqNo: 3359463 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|----------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-71980 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 71980 | | RunNo: 93211 | | | | | | |
| Prep Date: 12/9/2022 | | Analysis Date: 12/12/2022 | | SeqNo: 3359464 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00069 | 0.0010 | 0.001000 | 0 | 69.4 | 50 | 150 | | | J |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 119 | 50 | 150 | | | |
| Lead | 0.00049 | 0.00050 | 0.0005000 | 0 | 98.8 | 50 | 150 | | | J |
| Selenium | 0.0012 | 0.0010 | 0.001000 | 0 | 122 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|---------|------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MSLCS-71980 | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | | |
| Client ID: LCSW | Batch ID: 71980 | | RunNo: 93211 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359465 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.3 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 85 | 115 | | | |
| Selenium | 0.028 | 0.0010 | 0.02500 | 0 | 111 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364955 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364956 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0010 | 0.0010 | 0.001000 | 0 | 101 | 50 | 150 | | | |
| Arsenic | 0.0012 | 0.0010 | 0.001000 | 0 | 118 | 50 | 150 | | | |
| Lead | 0.00051 | 0.00050 | 0.0005000 | 0 | 102 | 50 | 150 | | | |
| Selenium | 0.0021 | 0.0010 | 0.001000 | 0 | 214 | 50 | 150 | | | S |

| | | | | | | | | | | |
|------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364957 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 97.7 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.8 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 95.7 | 85 | 115 | | | |
| Selenium | 0.023 | 0.0010 | 0.02500 | 0 | 92.1 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212442-001EMSL | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-7-22 | Batch ID: A93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364973 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 91.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212442-001EMSDL | SampType: MSD | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: EB-12-7-22 | Batch ID: A93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364974 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.011 | 0.00050 | 0.01250 | 0 | 87.2 | 70 | 130 | 4.65 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93438 | RunNo: 93438 | | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | SeqNo: 3370010 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93438 | RunNo: 93438 | | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | SeqNo: 3370011 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 94.8 | 50 | 150 | | | J |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93438 | RunNo: 93438 | | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | SeqNo: 3370012 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 85 | 115 | | | |

| | | | | | | | | | | |
|-----------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: A93556 | RunNo: 93556 | | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | SeqNo: 3375278 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: A93556 | RunNo: 93556 | | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | SeqNo: 3375279 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00091 | 0.0010 | 0.001000 | 0 | 91.4 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | TestCode: EPA 200.8: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: A93556 | RunNo: 93556 | | | | | | | | |
| Prep Date: | Analysis Date: 12/27/2022 | SeqNo: 3375281 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72128 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72128 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366417 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

| | | |
|------------------------|---------------------------|--|
| Sample ID: LCSLL-72128 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72128 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366418 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00018 0.00020 0.0001500 | 0 121 50 150 J |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: LCS-72128 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72128 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366419 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0049 0.00020 0.005000 | 0 98.1 85 115 |

| | | |
|---------------------------|-----------------------------------|--|
| Sample ID: 2212442-003DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-12 | Batch ID: 72128 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366474 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0060 0.00020 0.005000 0.0001319 | 117 75 125 |

| | | |
|----------------------------|-----------------------------------|--|
| Sample ID: 2212442-003DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: OW-12 | Batch ID: 72128 | RunNo: 93362 |
| Prep Date: 12/15/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366475 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0061 0.00020 0.005000 0.0001319 | 120 75 125 1.95 20 |

| | | |
|-----------------------|---------------------------|--|
| Sample ID: MB-72200 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72200 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369558 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND 0.00020 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-------------------------------|----------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL-72200 | SampType: LCSLL | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: BatchQC | Batch ID: 72200 | | | RunNo: 93426 | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | | | SeqNo: 3369559 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00021 | 0.00020 | 0.0001500 | 0 | 138 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCS-72200 | SampType: LCS | | | TestCode: EPA Method 245.1: Mercury | | | | | | |
| Client ID: LCSW | Batch ID: 72200 | | | RunNo: 93426 | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | | | SeqNo: 3369560 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 105 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72189 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72189 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370710 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72189 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72189 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370713 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.11 | 0.010 0.1000 0 113 70 130 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72189 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72189 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370721 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-71994 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 71994 | | RunNo: 93268 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | | SeqNo: 3365633 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.15 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 86.7 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-71994 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 71994 | | RunNo: 93268 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | | SeqNo: 3365634 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 112 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.018 | | 0.01875 | | 97.7 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-71994 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 71994 | | RunNo: 93268 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/14/2022 | | SeqNo: 3365635 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 114 | 31.2 | 125 | 1.68 | 20 | B |
| Surr: DNOP | 0.017 | | 0.01875 | | 91.3 | 15.9 | 177 | 0 | 0 | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72049 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72049 | | RunNo: 93339 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3366205 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.080 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 86.9 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72049 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72049 | | RunNo: 93339 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3366206 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.23 | 0.064 | 0.1875 | 0 | 122 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.021 | | 0.01875 | | 110 | 15.9 | 177 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|-----------|---|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSD-72049 | SampType: LCSD | | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | |
| Client ID: LCSS02 | Batch ID: 72049 | | | RunNo: 93339 | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | | SeqNo: 3366207 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.18 | 0.064 | 0.1875 | 0 | 97.5 | 31.2 | 125 | 22.7 | 20 | BR |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93213 | | RunNo: 93213 | | | | | | | |
| Prep Date: | Analysis Date: 12/13/2022 | | SeqNo: 3368698 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.47 | 0.050 | 0.5000 | 0 | 94.6 | 80 | 120 | | | |
| Surr: BFB | 46 | | 20.00 | | 228 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93213 | | RunNo: 93213 | | | | | | | |
| Prep Date: | Analysis Date: 12/13/2022 | | SeqNo: 3368699 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 21 | | 20.00 | | 105 | 70 | 130 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93331 | | RunNo: 93331 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364555 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 23 | 1.0 | 20.00 | 0 | 116 | 70 | 130 | | | |
| Toluene | 22 | 1.0 | 20.00 | 0 | 111 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 97.1 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 95.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs2 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93331 | | RunNo: 93331 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364556 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 24 | 1.0 | 20.00 | 0 | 121 | 70 | 130 | | | |
| Toluene | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 105 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93331 | | RunNo: 93331 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364578 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93331 | | | RunNo: 93331 | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | SeqNo: 3364578 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93331 | | | RunNo: 93331 | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | SeqNo: 3364578 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 115 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 107 | 70 | 130 | | | |

| Sample ID: mb2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|--------------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93331 | | | RunNo: 93331 | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | SeqNo: 3364579 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb2 | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93331 | | | RunNo: 93331 | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | | SeqNo: 3364579 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb2 | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93331 | | RunNo: 93331 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3364579 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 112 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 105 | 70 | 130 | | | |

| Sample ID: 100ng lcs3 | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: R93377 | | RunNo: 93377 | | | | | | | |
| Prep Date: | Analysis Date: 12/16/2022 | | SeqNo: 3367188 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 110 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93377 | | RunNo: 93377 | | | | | | | |
| Prep Date: | Analysis Date: 12/16/2022 | | SeqNo: 3367221 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 100 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 110 | 70 | 130 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R93377 | | | RunNo: 93377 | | | | | | |
| Prep Date: | Analysis Date: 12/16/2022 | | | SeqNo: 3367221 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: LCSW | Batch ID: R93479 | | | RunNo: 93479 | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | | | SeqNo: 3371419 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Toluene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Trichloroethene (TCE) | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
| Client ID: PBW | Batch ID: R93479 | | | RunNo: 93479 | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | | | SeqNo: 3371446 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb | SampType: MBLK | | | TestCode: EPA Method 8260B: VOLATILES | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: R93479 | | | RunNo: 93479 | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | | | SeqNo: 3371446 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-71974 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 71974 | | | RunNo: 93247 | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | | SeqNo: 3360800 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 79 | | 200.0 | | 39.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 62 | | 200.0 | | 30.9 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 52.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 51 | | 100.0 | | 51.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 44 | | 100.0 | | 44.2 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 84 | | 100.0 | | 84.4 | 34.4 | 134 | | | |

| Sample ID: lcs-71974 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|-----------------------------|----------------------------------|-----|-----------|--|--------------------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 71974 | | | RunNo: 93247 | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | | SeqNo: 3360801 | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-71974 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 71974 | | RunNo: 93247 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | SeqNo: 3360801 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 63 | 10 | 100.0 | 0 | 62.7 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 45 | 5.0 | 100.0 | 0 | 44.6 | 15 | 89.8 | | | |
| Phenol | 90 | 20 | 200.0 | 0 | 44.9 | 17 | 61.1 | | | |
| Pyrene | 89 | 10 | 100.0 | 0 | 89.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 100 | | 200.0 | | 50.6 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 78 | | 200.0 | | 39.1 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 170 | | 200.0 | | 83.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 70 | | 100.0 | | 70.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 60 | | 100.0 | | 60.2 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 98 | | 100.0 | | 97.9 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: IcsD-71974 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 71974 | | RunNo: 93247 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/13/2022 | | SeqNo: 3360802 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 57 | 10 | 100.0 | 0 | 57.2 | 21.3 | 104 | 9.14 | 45.3 | |
| 1,4-Dichlorobenzene | 39 | 5.0 | 100.0 | 0 | 39.0 | 15 | 89.8 | 13.5 | 39.6 | |
| Phenol | 75 | 20 | 200.0 | 0 | 37.7 | 17 | 61.1 | 17.4 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 78.8 | 61 | 123 | 12.3 | 11.8 | R |
| Surr: 2-Fluorophenol | 69 | | 200.0 | | 34.6 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 69 | | 200.0 | | 34.3 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 94 | | 200.0 | | 47.2 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 61.6 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 55.7 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 94.1 | 34.4 | 134 | 0 | 0 | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72036 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 72036 | | RunNo: 93376 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3367172 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72036 | SampType: MBLK | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: PBW | Batch ID: 72036 | | RunNo: 93376 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3367172 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 61 | | 200.0 | | 30.4 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 23.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 94 | | 200.0 | | 47.2 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 31 | | 100.0 | | 31.3 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 74 | | 100.0 | | 73.6 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72036 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72036 | | RunNo: 93376 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3367173 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 61 | 10 | 100.0 | 0 | 61.1 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 44.2 | 15 | 89.8 | | | |
| Phenol | 81 | 20 | 200.0 | 0 | 40.7 | 17 | 61.1 | | | |
| Pyrene | 95 | 10 | 100.0 | 0 | 95.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 95 | | 200.0 | | 47.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 71 | | 200.0 | | 35.7 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 71.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 64.4 | 16.8 | 112 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: Ics-72036 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSW | Batch ID: 72036 | RunNo: 93376 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367173 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.3 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 102 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|--|--------------------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: Icsd-72036 | SampType: LCSD | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72036 | RunNo: 93376 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367174 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 55 | 10 | 100.0 | 0 | 55.2 | 21.3 | 104 | 10.0 | 45.3 | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 38.1 | 15 | 89.8 | 14.9 | 39.6 | |
| Phenol | 72 | 20 | 200.0 | 0 | 36.2 | 17 | 61.1 | 11.6 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 79.5 | 61 | 123 | 17.9 | 11.8 | R |
| Surr: 2-Fluorophenol | 66 | | 200.0 | | 33.0 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 66 | | 200.0 | | 33.0 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.3 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.1 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.2 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 93.5 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-71974 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359415 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 53 | | 100.0 | | 52.6 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 77 | | 200.0 | | 38.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 49 | | 100.0 | | 48.7 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 130 | | 100.0 | | 130 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-71974-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359416 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.88 | 1.0 | 2.000 | 0 | 44.0 | 15 | 60.5 | | | J |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 15 | 96 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 21 | 103 | | | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 88.0 | 32.8 | 119 | | | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 89.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 89.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 68 | | 100.0 | | 67.7 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Ics-71974-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359416 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 0 | | 200.0 | | 0 | 15 | 112 | | | S |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 100 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: Icsd-71974-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 71974 | | RunNo: 93217 | | | | | | | |
| Prep Date: 12/9/2022 | Analysis Date: 12/12/2022 | | SeqNo: 3359417 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 1.0 | 2.000 | 0 | 43.0 | 15 | 60.5 | 2.30 | 29.7 | J |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 78.3 | 1.50 | 31.7 | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 79.6 | 0 | 31.4 | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 15 | 78.6 | 0 | 30.5 | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 92 | 1.40 | 30.5 | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 15 | 96 | 1.32 | 25.1 | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21 | 103 | 1.18 | 26.4 | |
| Anthracene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 21.1 | 106 | 0 | 14.4 | |
| Fluoranthene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 32.8 | 119 | 2.25 | 14.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 91.0 | 34.1 | 110 | 2.22 | 19.2 | |
| Benz(a)anthracene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 32 | 132 | 3.21 | 29.3 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 93.0 | 31.3 | 112 | 0 | 19 | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 90.0 | 34.1 | 119 | 1.12 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 97.0 | 24.7 | 152 | 4.21 | 21.3 | |
| Surr: Nitrobenzene-d5 | 66 | | 100.0 | | 65.7 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 0 | | 200.0 | | 0 | 15 | 112 | 0 | 0 | S |
| Surr: 2-Fluorobiphenyl | 58 | | 100.0 | | 57.8 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 90 | | 100.0 | | 89.9 | 15 | 166 | 0 | 0 | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72036 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72036 | | RunNo: 93333 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/15/2022 | | SeqNo: 3364749 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb-72036 | SampType: MBLK | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: PBW | Batch ID: 72036 | | RunNo: 93333 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/15/2022 | | SeqNo: 3364749 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 41 | | 100.0 | | 40.8 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 78 | | 200.0 | | 39.0 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 115 | 15 | 166 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72036-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72036 | | RunNo: 93333 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3364750 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.76 | 0.10 | 2.000 | 0 | 38.0 | 15 | 60.5 | | | |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 92 | | | |
| Fluorene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 96 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21 | 103 | | | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 32.8 | 119 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 32 | 132 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 90.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 105.0 | | 68.0 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 98 | | 210.0 | | 46.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 63 | | 105.0 | | 60.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 105.0 | | 101 | 15 | 166 | | | |

Qualifiers:

| | | | |
|-----|---|----|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| PQL | Practical Quantitative Limit | RL | Reporting Limit |
| S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212442

17-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: Icsd-72036-If | SampType: LCSD | | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|----------------------------------|------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | Batch ID: 72036 | | | RunNo: 93333 | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | | SeqNo: 3364751 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.64 | 0.10 | 2.000 | 0 | 32.0 | 15 | 60.5 | 17.1 | 29.7 | |
| Naphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 78.3 | 33.3 | 31.7 | R |
| 1-Methylnaphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 15 | 79.6 | 40.0 | 31.4 | R |
| 2-Methylnaphthalene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 15 | 78.6 | 39.1 | 30.5 | R |
| Acenaphthene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 15 | 92 | 37.8 | 30.5 | R |
| Fluorene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 15 | 96 | 31.4 | 25.1 | R |
| Phenanthrene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21 | 103 | 18.4 | 26.4 | |
| Anthracene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 21.1 | 106 | 14.3 | 14.4 | |
| Fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 32.8 | 119 | 10.3 | 14.8 | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 76.0 | 34.1 | 110 | 11.2 | 19.2 | |
| Benz(a)anthracene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 32 | 132 | 8.09 | 29.3 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 31.3 | 112 | 8.00 | 19 | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 83.0 | 34.1 | 119 | 8.09 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 24.7 | 152 | 7.57 | 21.3 | |
| Surr: Nitrobenzene-d5 | 60 | | 105.0 | | 57.1 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 210.0 | | 43.0 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 53 | | 105.0 | | 50.4 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 85 | | 105.0 | | 80.7 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Marathon

Work Order Number: 2212442

ReptNo: 1

Received By: Tracy Casarrubias 12/8/2022 7:20:00 AM

Completed By: Tracy Casarrubias 12/8/2022 8:20:32 AM

Reviewed By: KPC 12-8-22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

18 3
(52 or >12 unless noted)

Adjusted? No

Checked by: J 12-8-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 1.0 | Good | Yes | | | |
| 2 | 1.1 | Good | Yes | | | |
| 3 | 0.4 | Good | Yes | | | |
| 4 | 0.7 | Good | Yes | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212630

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 9 sample(s) on 12/9/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212630
Date: 1/9/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/20/2022 12:04:27 A | A93392 |
| Surr: BFB | 84.8 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:04:27 A | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Surr: Dibromofluoromethane | 106 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 8:37:09 PM | R93394 |
| Surr: Toluene-d8 | 105 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 8:37:09 PM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/21/2022 2:21:11 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.045 | 0.016 | 0.064 | JB | mg/L | 1 | 12/16/2022 11:02:04 A | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 11:02:04 A | 72049 |
| Surr: DNOP | 112 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 11:02:04 A | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: 2-Fluorophenol | 47.1 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: Phenol-d5 | 35.7 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 66.7 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: Nitrobenzene-d5 | 60.2 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 48.0 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 84.7 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 4:38:46 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 4:52:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.9 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 58.4 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 4:52:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 125 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 4:52:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:08:42 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 12:55:36 P | 72026 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 12/19/2022 12:55:36 P | 72026 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/19/2022 12:55:36 P | 72026 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/21/2022 4:31:41 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 12:53:36 P | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:30:00 AM

Lab ID: 2212630-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:28:04 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 4:02:59 PM | D93335 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 12/15/2022 4:02:59 PM | D93335 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 4:02:59 PM | D93335 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 4:02:59 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 12:55:44 P | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/20/2022 12:27:36 A | A93392 |
| Surr: BFB | 84.4 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:27:36 A | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,1-Dichloroethane | 1.0 | 0.27 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Surr: Dibromofluoromethane | 104 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 9:05:39 PM | R93394 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 12/19/2022 9:05:39 PM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 2:36:12 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.067 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 11:25:49 A | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 11:25:49 A | 72049 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 11:25:49 A | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: 2-Fluorophenol | 49.8 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: Phenol-d5 | 41.8 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 43.5 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: Nitrobenzene-d5 | 73.3 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 62.8 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 90.8 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 5:19:49 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 12 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 5:36:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 75.7 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 68.3 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 5:36:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 122 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 5:36:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.10 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Beryllium | 0.0010 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Chromium | 0.0034 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Nickel | 0.011 | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Silver | 0.0082 | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| Zinc | 0.0051 | 0.0039 | 0.010 | J | mg/L | 1 | 12/13/2022 8:14:38 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 3:43:39 PM | 72026 |
| Arsenic | ND | 0.0011 | 0.0050 | | mg/L | 5 | 12/21/2022 3:43:39 PM | 72026 |
| Lead | 0.0019 | 0.00097 | 0.0025 | J | mg/L | 5 | 12/19/2022 3:28:09 PM | 72026 |
| Selenium | 0.0052 | 0.0044 | 0.0050 | | mg/L | 5 | 12/21/2022 4:36:35 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 1:49:58 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-40

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 9:50:00 AM

Lab ID: 2212630-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.045 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Nickel | 0.0096 | 0.0033 | 0.010 | J | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Silver | 0.0070 | 0.0013 | 0.0050 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Vanadium | 0.0097 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| Zinc | 0.011 | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:32:57 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 6:02:53 PM | D93335 |
| Arsenic | 0.0010 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 6:02:53 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 6:02:53 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 6:02:53 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 1:52:05 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.36 | 0.0090 | 0.050 | | mg/L | 1 | 12/20/2022 1:37:03 AM | A93392 |
| Surr: BFB | 83.6 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:37:03 AM | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.45 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Toluene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Ethylbenzene | ND | 0.43 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Methyl tert-butyl ether (MTBE) | 460 | 7.9 | 20 | | µg/L | 20 | 12/19/2022 11:56:13 P | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.24 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 1,2-Dichloroethane (EDC) | 14 | 0.51 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| cis-1,2-DCE | 3.2 | 0.78 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 1,1-Dichloroethane | 42 | 0.55 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 1,1-Dichloroethene | 44 | 0.40 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Isopropylbenzene | ND | 0.37 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| n-Butylbenzene | ND | 0.51 | 6.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| n-Propylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| sec-Butylbenzene | ND | 0.29 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| 1,1,1-Trichloroethane | 2.1 | 0.60 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Trichloroethene (TCE) | 6.1 | 0.41 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Xylenes, Total | ND | 0.74 | 3.0 | | µg/L | 2 | 12/20/2022 12:24:33 A | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 70-130 | | %Rec | 2 | 12/20/2022 12:24:33 A | R93394 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 2 | 12/20/2022 12:24:33 A | R93394 |
| Surr: Dibromofluoromethane | 91.7 | 0 | 70-130 | | %Rec | 2 | 12/20/2022 12:24:33 A | R93394 |
| Surr: Toluene-d8 | 111 | 0 | 70-130 | | %Rec | 2 | 12/20/2022 12:24:33 A | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 2:51:14 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.23 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 11:49:34 A | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 11:49:34 A | 72049 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 11:49:34 A | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: 2-Fluorophenol | 36.4 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: Phenol-d5 | 28.7 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 49.5 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: Nitrobenzene-d5 | 48.5 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 40.7 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 65.1 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 6:01:06 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 110 | 1.1 | 10 | | µg/L | 10 | 12/16/2022 12:13:00 P | 72036 |
| Naphthalene | 0.52 | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| 1-Methylnaphthalene | 0.16 | 0.15 | 0.30 | J | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| 2-Methylnaphthalene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 6:21:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 69.6 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 60.0 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 6:21:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 107 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 6:21:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.73 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Beryllium | 0.0050 | 0.00060 | 0.0020 | * | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Chromium | 0.030 | 0.0020 | 0.0060 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Cobalt | 0.018 | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Nickel | 0.041 | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Vanadium | 0.057 | 0.0035 | 0.050 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| Zinc | 0.047 | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:21:02 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:00:28 PM | 72026 |
| Arsenic | 0.0053 | 0.00022 | 0.0010 | | mg/L | 1 | 12/19/2022 1:00:28 PM | 72026 |
| Lead | 0.029 | 0.00097 | 0.0025 | * | mg/L | 5 | 12/19/2022 3:30:35 PM | 72026 |
| Selenium | 0.0067 | 0.00089 | 0.0010 | | mg/L | 1 | 12/21/2022 4:34:07 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 1:54:13 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-31

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:15:00 AM

Lab ID: 2212630-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.11 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Nickel | 0.0046 | 0.0033 | 0.010 | J | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Silver | 0.0016 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Vanadium | 0.0039 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| Zinc | 0.0048 | 0.0032 | 0.010 | J | mg/L | 1 | 12/22/2022 5:37:36 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 4:53:40 PM | D93335 |
| Arsenic | 0.00068 | 0.00012 | 0.0010 | J | mg/L | 1 | 12/15/2022 4:53:40 PM | D93335 |
| Lead | 0.000093 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 4:53:40 PM | D93335 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 4:53:40 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 1:56:22 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.034 | 0.0090 | 0.050 | J | mg/L | 1 | 12/20/2022 2:00:07 AM | A93392 |
| Surr: BFB | 84.1 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:00:07 AM | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Methyl tert-butyl ether (MTBE) | 39 | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,1-Dichloroethane | 1.9 | 0.27 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 12:52:52 A | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:52:52 A | R93394 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:52:52 A | R93394 |
| Surr: Dibromofluoromethane | 95.4 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:52:52 A | R93394 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 12:52:52 A | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0096 | | µg/L | 1 | 12/21/2022 3:06:13 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.17 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 12:13:18 P | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 12:13:18 P | 72049 |
| Surr: DNOP | 117 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 12:13:18 P | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: 2-Fluorophenol | 43.4 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: Phenol-d5 | 37.9 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 35.6 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: Nitrobenzene-d5 | 61.8 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 53.8 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 79.4 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 6:41:37 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 8.2 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 7:06:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 73.1 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 62.9 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 7:06:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 112 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 7:06:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.087 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Nickel | 0.034 | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Silver | 0.0057 | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Vanadium | 0.0063 | 0.0035 | 0.050 | J | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:22:56 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 3:48:32 PM | 72026 |
| Arsenic | ND | 0.0011 | 0.0050 | | mg/L | 5 | 12/21/2022 3:48:32 PM | 72026 |
| Lead | 0.0011 | 0.00097 | 0.0025 | J | mg/L | 5 | 12/19/2022 3:33:01 PM | 72026 |
| Selenium | ND | 0.0044 | 0.0050 | | mg/L | 5 | 12/22/2022 2:00:58 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 1:58:30 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-27

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:30:00 AM

Lab ID: 2212630-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.065 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Nickel | 0.030 | 0.0033 | 0.010 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Silver | 0.0031 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Vanadium | 0.0039 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:44:54 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 7:16:42 PM | D93335 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 12/20/2022 2:29:47 PM | A93438 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 2:29:47 PM | A93438 |
| Selenium | 0.0031 | 0.0017 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:29:47 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:00:39 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/20/2022 2:23:12 AM | A93392 |
| Surr: BFB | 82.3 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:23:12 AM | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Methyl tert-butyl ether (MTBE) | 2.9 | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Surr: 4-Bromofluorobenzene | 109 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Surr: Dibromofluoromethane | 96.4 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:21:08 AM | R93394 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:21:08 AM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 3:21:13 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.20 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 12:37:01 P | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 12:37:01 P | 72049 |
| Surr: DNOP | 104 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 12:37:01 P | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: 2-Fluorophenol | 45.5 | 0 | 15-84.5 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: Phenol-d5 | 36.2 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 61.9 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: Nitrobenzene-d5 | 57.4 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 51.6 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 76.1 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 7:22:39 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.66 | 0.11 | 1.0 | J | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Naphthalene | 0.24 | 0.20 | 0.30 | J | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 7:51:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 63.7 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 7:51:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 101 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 7:51:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.19 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Beryllium | 0.00089 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Chromium | 0.0028 | 0.0020 | 0.0060 | J | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Cobalt | 0.0038 | 0.0035 | 0.0060 | J | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Nickel | 0.0089 | 0.0053 | 0.010 | J | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Vanadium | 0.016 | 0.0035 | 0.050 | J | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| Zinc | 0.020 | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:31:02 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:05:21 PM | 72026 |
| Arsenic | 0.0034 | 0.00022 | 0.0010 | | mg/L | 1 | 12/19/2022 1:05:21 PM | 72026 |
| Lead | 0.0071 | 0.00019 | 0.00050 | | mg/L | 1 | 12/19/2022 1:05:21 PM | 72026 |
| Selenium | 0.0063 | 0.00089 | 0.0010 | | mg/L | 1 | 12/22/2022 2:03:25 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:02:48 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-28

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 10:40:00 AM

Lab ID: 2212630-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: VP | |
| Barium | 0.086 | 0.0011 | 0.0020 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Nickel | 0.0062 | 0.0033 | 0.010 | J | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Silver | 0.0020 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Vanadium | 0.0055 | 0.0017 | 0.050 | J | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/22/2022 5:48:55 PM | B93514 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 5:12:21 PM | D93335 |
| Arsenic | 0.055 | 0.00061 | 0.0050 | * | mg/L | 5 | 12/15/2022 7:28:23 PM | D93335 |
| Lead | 0.00018 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 5:12:21 PM | D93335 |
| Selenium | ND | 0.017 | 0.050 | | mg/L | 50 | 12/20/2022 2:34:54 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:04:57 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | 0.023 | 0.0090 | 0.050 | J | mg/L | 1 | 12/20/2022 2:46:21 AM | A93392 |
| Surr: BFB | 85.3 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:46:21 AM | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 0.59 | 0.23 | 1.0 | J | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Methyl tert-butyl ether (MTBE) | 22 | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,1-Dichloroethane | 0.76 | 0.27 | 1.0 | J | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Surr: 4-Bromofluorobenzene | 110 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Surr: Dibromofluoromethane | 90.0 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:49:23 AM | R93394 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 1:49:23 AM | R93394 |

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|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/21/2022 3:36:13 PM | 72190 |

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| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
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Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.31 | 0.016 | 0.064 | B | mg/L | 1 | 12/16/2022 1:00:42 PM | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 1:00:42 PM | 72049 |
| Surr: DNOP | 110 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 1:00:42 PM | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: 2-Fluorophenol | 1.92 | 0 | 15-84.5 | S | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: Phenol-d5 | 9.84 | 0 | 15-67 | S | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 1.62 | 0 | 15-108 | S | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: Nitrobenzene-d5 | 62.5 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 50.6 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 81.0 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 8:02:56 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 5.0 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 8:36:00 AM | 72036 |

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|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
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Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 70.7 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 58.3 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 8:36:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 110 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 8:36:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
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Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.31 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Nickel | 0.019 | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Silver | 0.011 | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Vanadium | 0.0078 | 0.0035 | 0.050 | J | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| Zinc | 0.010 | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:32:57 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/19/2022 1:27:59 PM | 72026 |
| Arsenic | 0.0013 | 0.0011 | 0.0050 | J | mg/L | 5 | 12/21/2022 3:58:20 PM | 72026 |
| Lead | 0.00046 | 0.00019 | 0.00050 | J | mg/L | 1 | 12/19/2022 1:27:59 PM | 72026 |
| Selenium | ND | 0.0044 | 0.0050 | | mg/L | 5 | 12/22/2022 2:05:51 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:07:07 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: MKTF-29

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|----------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.22 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Nickel | 0.015 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Silver | 0.0044 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Vanadium | 0.0056 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 1:22:59 PM | B93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 5:16:14 PM | D93335 |
| Arsenic | ND | 0.00061 | 0.0050 | | mg/L | 5 | 12/20/2022 2:40:01 PM | A93438 |
| Lead | 0.000073 | 0.000057 | 0.00050 | J | mg/L | 1 | 12/15/2022 5:16:14 PM | D93335 |
| Selenium | 0.0027 | 0.0017 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:40:01 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:09:15 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/20/2022 3:09:25 AM | A93392 |
| Surr: BFB | 82.7 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 3:09:25 AM | A93392 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,1-Dichloroethane | 1.0 | 0.27 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 110 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Surr: Dibromofluoromethane | 93.3 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:17:38 AM | R93394 |
| Surr: Toluene-d8 | 110 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:17:38 AM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/21/2022 3:51:12 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: JME | |
| Diesel Range Organics (DRO) | 0.044 | 0.016 | 0.064 | J | mg/L | 1 | 12/16/2022 1:24:17 PM | 72049 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/16/2022 1:24:17 PM | 72049 |
| Surr: DNOP | 99.7 | 0 | 15.9-177 | | %Rec | 1 | 12/16/2022 1:24:17 PM | 72049 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: 2-Fluorophenol | 9.97 | 0 | 15-84.5 | S | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: Phenol-d5 | 23.5 | 0 | 15-67 | | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: 2,4,6-Tribromophenol | 2.06 | 0 | 15-108 | S | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: Nitrobenzene-d5 | 57.7 | 0 | 16.8-112 | | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: 2-Fluorobiphenyl | 46.4 | 0 | 15-101 | | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| Surr: 4-Terphenyl-d14 | 84.3 | 0 | 34.4-134 | | %Rec | 1 | 12/16/2022 8:44:14 PM | 72036 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 11 | 0.11 | 1.0 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/16/2022 9:20:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 68.5 | 0 | 15-108 | | %Rec | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Surr: 2-Fluorobiphenyl | 59.4 | 0 | 15-107 | | %Rec | 1 | 12/16/2022 9:20:00 AM | 72036 |
| Surr: 4-Terphenyl-d14 | 129 | 0 | 15-166 | | %Rec | 1 | 12/16/2022 9:20:00 AM | 72036 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.098 | 0.0016 | 0.0030 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Nickel | 0.012 | 0.0053 | 0.010 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Silver | 0.0083 | 0.0018 | 0.0050 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Vanadium | 0.015 | 0.0035 | 0.050 | J | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/13/2022 8:34:52 PM | 72026 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/21/2022 4:00:47 PM | 72026 |
| Arsenic | 0.0014 | 0.0011 | 0.0050 | J | mg/L | 5 | 12/21/2022 4:00:47 PM | 72026 |
| Lead | 0.0018 | 0.00097 | 0.0025 | J | mg/L | 5 | 12/19/2022 3:35:27 PM | 72026 |
| Selenium | ND | 0.0044 | 0.0050 | | mg/L | 5 | 12/22/2022 2:08:18 PM | 72026 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:15:39 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP 12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022

Lab ID: 2212630-007E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.033 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Nickel | 0.0078 | 0.0033 | 0.010 | J | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Silver | 0.0031 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Vanadium | 0.0075 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 1:26:38 PM | B93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 7:36:09 PM | D93335 |
| Arsenic | 0.00069 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:45:08 PM | A93438 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/20/2022 2:45:08 PM | A93438 |
| Selenium | 0.0026 | 0.0017 | 0.0050 | J | mg/L | 5 | 12/20/2022 2:45:08 PM | A93438 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:22:03 PM | 72201 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-8-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/8/2022 11:00:00 AM

Lab ID: 2212630-008A

Matrix: Aqueous

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Surr: 4-Bromofluorobenzene | 106 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Surr: Dibromofluoromethane | 91.2 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:45:55 AM | R93394 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 2:45:55 AM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212630-009A

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Surr: 1,2-Dichloroethane-d4 | 109 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Surr: 4-Bromofluorobenzene | 112 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Surr: Dibromofluoromethane | 96.1 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 3:14:09 AM | R93394 |
| Surr: Toluene-d8 | 111 | 0 | 70-130 | | %Rec | 1 | 12/20/2022 3:14:09 AM | R93394 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212630

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: Trip Blank

Project: 2022 GW Sampling 4th Quarter

Collection Date:

Lab ID: 2212630-009B

Matrix: Trip Blank

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/21/2022 4:06:10 PM | 72190 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



ANALYTICAL REPORT

December 19, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1567071

Samples Received: 12/13/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Cn: Case Narrative | 4 |
| Sr: Sample Results | 5 |
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2212630-001F EB-12-8-22 L1567071-01 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:55 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

2212630-002F MKTF-40 L1567071-02 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:56 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212630-003F MKTF-31 L1567071-03 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:57 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212630-004F MKTF-27 L1567071-04 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 16:58 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212630-005F MKTF-28 L1567071-05 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 17:01 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212630-006F MKTF-29 L1567071-06 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 17:02 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212630-007F DUP 12-8-22 L1567071-07 GW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1974296 | 1 | 12/18/22 16:42 | 12/19/22 17:03 | JCS | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 16:55 | WG1974296 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0115 | | 0.00500 | 1 | 12/19/2022 16:56 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00599 | | 0.00500 | 1 | 12/19/2022 16:57 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00614 | | 0.00500 | 1 | 12/19/2022 16:58 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 17:01 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/19/2022 17:02 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00808 | | 0.00500 | 1 | 12/19/2022 17:03 | WG1974296 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3873576-1 12/19/22 16:37

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

L1566638-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1566638-01 12/19/22 16:41 • (DUP) R3873576-3 12/19/22 16:42

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1567062-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1567062-04 12/19/22 16:50 • (DUP) R3873576-6 12/19/22 16:51

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 200 | P1 | 20 |

Laboratory Control Sample (LCS)

(LCS) R3873576-2 12/19/22 16:38

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0951 | 95.1 | 87.1-120 | |

L1567062-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1567062-01 12/19/22 16:43 • (MS) R3873576-4 12/19/22 16:44 • (MSD) R3873576-5 12/19/22 16:45

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0923 | 0.0923 | 92.3 | 92.3 | 1 | 90.0-110 | | | 0.000 | 20 |

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| P1 | RPD value not applicable for sample concentrations less than 5 times the reporting limit. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

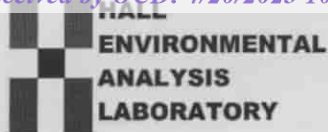
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Page 4360 of 5177
 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

| | | | | | | | |
|---|--|-------------------------|--|------------------------------|--|----------------------------|--|
| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | | | | |

| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
|------|--------------|------------------|---------------------|-----------------|-----------------------|--------------|--|
| 1 | 2212630-001F | EB-12-8-22 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 9:30:00 AM | 1 | Total Cyanide J and MDL -01 |
| 2 | 2212630-002F | MKTF-40 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 9:50:00 AM | 1 | Total Cyanide J and MDL -02 |
| 3 | 2212630-003F | MKTF-31 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 10:15:00 AM | 1 | Total Cyanide J and MDL -03 |
| 4 | 2212630-004F | MKTF-27 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 10:30:00 AM | 1 | Total Cyanide J and MDL -04 |
| 5 | 2212630-005F | MKTF-28 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 10:40:00 AM | 1 | Total Cyanide J and MDL -05 |
| 6 | 2212630-006F | MKTF-29 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 11:00:00 AM | 1 | Total Cyanide J and MDL -06 |
| 7 | 2212630-007F | DUP 12-8-22 | 500AMBHDP
E.NAOW | Groundw
ater | 12/8/2022 | 1 | Total Cyanide J and MDL -07 |

Sample Receipt Checklist

 COC Seal Present/Intact: ☒ N If Applicable
 COC Signed/Accurate: ☒ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ N Pres. Correct/Check: ☐ Y ☒ N
 Correct bottles used: ☒ N
 Sufficient volume sent: ☒ N
 RAD Screen <0.5 mR/hr: ☒ N

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

| | | | | | | | |
|---|--|--|--|--|--|---|--|
| Relinquished By: <i>JA</i> Date: 12/9/2022 Time: 12:22 PM Received By: <i>[Signature]</i> Date: 12/13/22 Time: 09:00 | | | | | | REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: Date: Time: Received By: Date: Time: | | | | | | FOR LAB USE ONLY
Temp of samples <u>0.6</u> °C Attempt to Cool? _____
Comments: _____ | |
| Relinquished By: Date: Time: Received By: Date: Time: | | | | | | | |
| TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72026 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72026 | RunNo: 93245 | | | | | | | | |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360580 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72026 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72026 | RunNo: 93245 | | | | | | | | |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360581 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0027 | 0.0030 | 0.002000 | 0 | 135 | 50 | 150 | | | J |
| Beryllium | 0.0023 | 0.0020 | 0.002000 | 0 | 114 | 50 | 150 | | | |
| Chromium | 0.0085 | 0.0060 | 0.006000 | 0 | 142 | 50 | 150 | | | |
| Nickel | 0.0046 | 0.010 | 0.005000 | 0 | 92.8 | 50 | 150 | | | J |
| Silver | 0.0052 | 0.0050 | 0.005000 | 0 | 105 | 50 | 150 | | | |
| Vanadium | 0.0095 | 0.050 | 0.01000 | 0 | 94.8 | 50 | 150 | | | J |
| Zinc | 0.015 | 0.010 | 0.01000 | 0 | 146 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72026 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72026 | RunNo: 93245 | | | | | | | | |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360582 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.51 | 0.0030 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 85 | 115 | | | |
| Nickel | 0.49 | 0.010 | 0.5000 | 0 | 98.1 | 85 | 115 | | | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 98.1 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72026 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72026 | RunNo: 93246 | | | | | | | | |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360659 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cadmium | 0.016 | 0.0020 | | | | | | | | * |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72026 | SampType: MBLK | TestCode: EPA Method 200.7: Metals |
| Client ID: PBW | Batch ID: 72026 | RunNo: 93246 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360659 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cobalt | ND | 0.0060 |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: LCSLL-72026 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals |
| Client ID: BatchQC | Batch ID: 72026 | RunNo: 93246 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360660 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cadmium | 0.0097 | 0.0020 0.002000 0 484 50 150 BS |
| Cobalt | 0.0063 | 0.0060 0.006000 0 104 50 150 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72026 | SampType: LCS | TestCode: EPA Method 200.7: Metals |
| Client ID: LCSW | Batch ID: 72026 | RunNo: 93246 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360661 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Cadmium | 0.50 | 0.0020 0.5000 0 99.8 85 115 B |
| Cobalt | 0.48 | 0.0060 0.5000 0 96.5 85 115 |

| | | |
|----------------------------------|----------------------------------|--|
| Sample ID: 2212630-001DMS | SampType: MS | TestCode: EPA Method 200.7: Metals |
| Client ID: EB-12-8-22 | Batch ID: 72026 | RunNo: 93246 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360722 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.50 | 0.0030 0.5000 0 99.6 70 130 |
| Beryllium | 0.49 | 0.0020 0.5000 0 97.9 70 130 |
| Cadmium | 0.50 | 0.0020 0.5000 0 99.5 70 130 B |
| Chromium | 0.49 | 0.0060 0.5000 0 98.2 70 130 |
| Cobalt | 0.49 | 0.0060 0.5000 0 97.8 70 130 |
| Nickel | 0.49 | 0.010 0.5000 0 98.8 70 130 |
| Silver | 0.10 | 0.0050 0.1000 0 100 70 130 |
| Vanadium | 0.49 | 0.050 0.5000 0 98.0 70 130 |
| Zinc | 0.47 | 0.010 0.5000 0 94.9 70 130 |

| | | |
|-----------------------------------|----------------------------------|--|
| Sample ID: 2212630-001DMSD | SampType: MSD | TestCode: EPA Method 200.7: Metals |
| Client ID: EB-12-8-22 | Batch ID: 72026 | RunNo: 93246 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360723 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Barium | 0.51 | 0.0030 0.5000 0 102 70 130 2.12 20 |
| Beryllium | 0.50 | 0.0020 0.5000 0 99.2 70 130 1.37 20 |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|------------------------------------|------|-------------|-----------|-------|----------|------|
| Sample ID: 2212630-001DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: EB-12-8-22 | | Batch ID: 72026 | | RunNo: 93246 | | | | | | |
| Prep Date: 12/12/2022 | | Analysis Date: 12/13/2022 | | SeqNo: 3360723 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 102 | 70 | 130 | 2.16 | 20 | B |
| Chromium | 0.50 | 0.0060 | 0.5000 | 0 | 100 | 70 | 130 | 1.83 | 20 | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.8 | 70 | 130 | 1.98 | 20 | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 101 | 70 | 130 | 1.97 | 20 | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 101 | 70 | 130 | 0.541 | 20 | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 99.7 | 70 | 130 | 1.68 | 20 | |
| Zinc | 0.48 | 0.010 | 0.5000 | 0 | 96.8 | 70 | 130 | 2.00 | 20 | |

| | | | | | | | | | | |
|---------------------------|--------|---------------------------|-----------|------------------------------------|----------------|----------|-------------|------|----------|------|
| Sample ID: 2212630-002DMS | | SampType: MS | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-40 | | Batch ID: 72026 | | | RunNo: 93246 | | | | | |
| Prep Date: 12/12/2022 | | Analysis Date: 12/13/2022 | | | SeqNo: 3360725 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.58 | 0.0030 | 0.5000 | 0.09992 | 95.6 | 70 | 130 | | | |
| Beryllium | 0.46 | 0.0020 | 0.5000 | 0.001048 | 92.4 | 70 | 130 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.0 | 70 | 130 | | | B |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0.003417 | 93.2 | 70 | 130 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 91.5 | 70 | 130 | | | |
| Nickel | 0.48 | 0.010 | 0.5000 | 0.01098 | 93.8 | 70 | 130 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0.008173 | 107 | 70 | 130 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0.01635 | 95.9 | 70 | 130 | | | |
| Zinc | 0.44 | 0.010 | 0.5000 | 0.005076 | 86.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|------------------------------------|----------------|----------|-------------|-------|----------|------|
| Sample ID: 2212630-002DMSD | | SampType: MSD | | TestCode: EPA Method 200.7: Metals | | | | | | |
| Client ID: MKTF-40 | | Batch ID: 72026 | | | RunNo: 93246 | | | | | |
| Prep Date: 12/12/2022 | | Analysis Date: 12/13/2022 | | | SeqNo: 3360726 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.57 | 0.0030 | 0.5000 | 0.09992 | 94.1 | 70 | 130 | 1.38 | 20 | B |
| Beryllium | 0.46 | 0.0020 | 0.5000 | 0.001048 | 92.7 | 70 | 130 | 0.356 | 20 | |
| Cadmium | 0.48 | 0.0020 | 0.5000 | 0 | 96.6 | 70 | 130 | 1.47 | 20 | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0.003417 | 91.9 | 70 | 130 | 1.32 | 20 | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 89.4 | 70 | 130 | 2.28 | 20 | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0.01098 | 92.6 | 70 | 130 | 1.30 | 20 | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0.008173 | 105 | 70 | 130 | 1.47 | 20 | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0.01635 | 94.3 | 70 | 130 | 1.63 | 20 | |
| Zinc | 0.43 | 0.010 | 0.5000 | 0.005076 | 84.7 | 70 | 130 | 2.49 | 20 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373357 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0013 | 0.0020 | | | | | | | | J |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373358 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0020 | 0.002000 | 0 | 95.0 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 97.8 | 50 | 150 | | | J |
| Cadmium | 0.0017 | 0.0020 | 0.002000 | 0 | 83.5 | 50 | 150 | | | J |
| Chromium | 0.0057 | 0.0060 | 0.006000 | 0 | 95.6 | 50 | 150 | | | J |
| Cobalt | 0.0067 | 0.0060 | 0.006000 | 0 | 112 | 50 | 150 | | | |
| Nickel | 0.0040 | 0.010 | 0.005000 | 0 | 80.5 | 50 | 150 | | | J |
| Silver | 0.0047 | 0.0050 | 0.005000 | 0 | 93.9 | 50 | 150 | | | J |
| Vanadium | 0.0094 | 0.050 | 0.01000 | 0 | 94.4 | 50 | 150 | | | J |
| Zinc | 0.0094 | 0.010 | 0.01000 | 0 | 93.5 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B93514 | RunNo: 93514 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373359 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.52 | 0.0020 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.50 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.50 | 0.0060 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Nickel | 0.51 | 0.010 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.51 | 0.050 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Zinc | 0.51 | 0.010 | 0.5000 | 0 | 102 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-B | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: B93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375406 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-B | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: B93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375407 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0021 | 0.0020 | 0.002000 | 0 | 105 | 50 | 150 | | | |
| Beryllium | 0.0021 | 0.0020 | 0.002000 | 0 | 104 | 50 | 150 | | | |
| Cadmium | 0.0026 | 0.0020 | 0.002000 | 0 | 128 | 50 | 150 | | | |
| Chromium | 0.0039 | 0.0060 | 0.006000 | 0 | 65.3 | 50 | 150 | | | J |
| Cobalt | 0.0070 | 0.0060 | 0.006000 | 0 | 117 | 50 | 150 | | | |
| Nickel | 0.0052 | 0.010 | 0.005000 | 0 | 104 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.9 | 50 | 150 | | | J |
| Vanadium | 0.0099 | 0.050 | 0.01000 | 0 | 99.4 | 50 | 150 | | | J |
| Zinc | 0.012 | 0.010 | 0.01000 | 0 | 123 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-B | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: B93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375408 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.48 | 0.0020 | 0.5000 | 0 | 95.9 | 85 | 115 | | | |
| Beryllium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 94.8 | 85 | 115 | | | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0 | 94.0 | 85 | 115 | | | |
| Cobalt | 0.46 | 0.0060 | 0.5000 | 0 | 91.1 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 103 | 85 | 115 | | | |
| Vanadium | 0.50 | 0.050 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Zinc | 0.46 | 0.010 | 0.5000 | 0 | 92.2 | 85 | 115 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72026 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 72026 | RunNo: 93249 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360859 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | ND | 0.0010 |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |

| | | |
|---------------------------------|----------------------------------|--|
| Sample ID: MSLCSLL-72026 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 72026 | RunNo: 93249 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360860 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.00051 | 0.0010 0.001000 0 51.2 50 150 J |
| Arsenic | 0.0011 | 0.0010 0.001000 0 114 50 150 |
| Lead | 0.00051 | 0.00050 0.0005000 0 102 50 150 |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: MSLCS-72026 | SampType: LCS | TestCode: EPA 200.8: Metals |
| Client ID: LCSW | Batch ID: 72026 | RunNo: 93249 |
| Prep Date: 12/12/2022 | Analysis Date: 12/13/2022 | SeqNo: 3360861 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.028 | 0.0010 0.02500 0 111 85 115 |
| Arsenic | 0.026 | 0.0010 0.02500 0 104 85 115 |
| Lead | 0.013 | 0.00050 0.01250 0 104 85 115 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72026 | SampType: MBLK | TestCode: EPA 200.8: Metals |
| Client ID: PBW | Batch ID: 72026 | RunNo: 93483 |
| Prep Date: 12/12/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371594 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.00052 | 0.0010 J |
| Arsenic | ND | 0.0010 |
| Lead | ND | 0.00050 |
| Selenium | ND | 0.0010 |

| | | |
|---------------------------------|----------------------------------|--|
| Sample ID: MSLCSLL-72026 | SampType: LCSLL | TestCode: EPA 200.8: Metals |
| Client ID: BatchQC | Batch ID: 72026 | RunNo: 93483 |
| Prep Date: 12/12/2022 | Analysis Date: 12/21/2022 | SeqNo: 3371595 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Antimony | 0.0011 | 0.0010 0.001000 0 113 50 150 |
| Arsenic | 0.00079 | 0.0010 0.001000 0 78.7 50 150 J |
| Lead | 0.00053 | 0.00050 0.0005000 0 105 50 150 |

Qualifiers:

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D Sample Diluted Due to Matrix
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PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|--------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-72026 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 72026 | | | RunNo: 93483 | | | | | |
| Prep Date: 12/12/2022 | | Analysis Date: 12/21/2022 | | | SeqNo: 3371595 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0014 | 0.0010 | 0.001000 | 0 | 135 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|--------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-72026 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 72026 | | | RunNo: 93483 | | | | | |
| Prep Date: 12/12/2022 | | Analysis Date: 12/21/2022 | | | SeqNo: 3371596 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.026 | 0.0010 | 0.02500 | 0 | 103 | 85 | 115 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 98.2 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 103 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.7 | 85 | 115 | | | |

Qualifiers:

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PQL Practical Quantitative Limit
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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212630-001EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-12-8-22 | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3365024 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.024 | 0.0010 | 0.02500 | 0 | 96.3 | 70 | 130 | | | |
| Arsenic | 0.027 | 0.0010 | 0.02500 | 0 | 108 | 70 | 130 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 102 | 70 | 130 | | | |
| Selenium | 0.031 | 0.0010 | 0.02500 | 0 | 123 | 70 | 130 | | | |

| | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|
| Sample ID: 2212630-001EMSDL SampType: MSD | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|

| | | | | | | | | | | |
|----------------|---------|---------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: D93335 | | | RunNo: 93335 | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | | SeqNo: 3367248 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00050 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------|----------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3367249 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00058 | 0.00050 | 0.0005000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------|--------|---------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: LCSW | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3367250 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 93.0 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: D93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3367250 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|--------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: D93335 | | RunNo: 93335 | | | | | | | |
| Prep Date: | Analysis Date: 12/15/2022 | | SeqNo: 3367251 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

| | | | | | | | | | | |
|-----------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB | SampType: MBLK | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: PBW | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370010 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370011 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.00095 | 0.0010 | 0.001000 | 0 | 94.8 | 50 | 150 | | | J |
| Lead | 0.00050 | 0.00050 | 0.0005000 | 0 | 99.8 | 50 | 150 | | | J |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 113 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|----------------------------------|---------|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS | SampType: LCS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | | |
| Client ID: LCSW | Batch ID: A93438 | | RunNo: 93438 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3370012 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 94.3 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 98.9 | 85 | 115 | | | |
| Selenium | 0.025 | 0.0010 | 0.02500 | 0 | 99.4 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72201 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72201 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369561 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: LCSLL-72201 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72201 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369562 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00020 | 0.00020 0.0001500 0 131 50 150 J |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72201 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72201 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369563 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0053 | 0.00020 0.005000 0 107 85 115 |

| | | |
|----------------------------------|----------------------------------|--|
| Sample ID: 2212630-007DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP 12-8-22 | Batch ID: 72201 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369598 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0048 | 0.00020 0.005000 0 96.7 75 125 |

| | | |
|-----------------------------------|----------------------------------|--|
| Sample ID: 2212630-007DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP 12-8-22 | Batch ID: 72201 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369599 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0047 | 0.00020 0.005000 0 94.6 75 125 2.20 20 |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72190 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370711 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72190 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72190 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370714 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 124 70 130 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72190 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72190 | RunNo: 93452 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3370722 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72049 | SampType: MBLK | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: PBW | Batch ID: 72049 | RunNo: 93339 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366205 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.080 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.033 | | 0.03750 | | 86.9 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72049 | SampType: LCS | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSW | Batch ID: 72049 | RunNo: 93339 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366206 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.23 | 0.064 | 0.1875 | 0 | 122 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.021 | | 0.01875 | | 110 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72049 | SampType: LCSD | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72049 | RunNo: 93339 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3366207 | | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.18 | 0.064 | 0.1875 | 0 | 97.5 | 31.2 | 125 | 22.7 | 20 | BR |
| Surr: DNOP | 0.020 | | 0.01875 | | 107 | 15.9 | 177 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: A93392 | | RunNo: 93392 | | | | | | | |
| Prep Date: | Analysis Date: 12/19/2022 | | SeqNo: 3368366 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 88.9 | 70 | 130 | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: A93392 | | RunNo: 93392 | | | | | | | |
| Prep Date: | Analysis Date: 12/19/2022 | | SeqNo: 3368367 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.50 | 0.050 | 0.5000 | 0 | 100 | 80 | 120 | | | |
| Surr: BFB | 37 | | 20.00 | | 185 | 70 | 130 | | | S |

| | | | | | | | | | | |
|----------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212630-002ams | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-40 | Batch ID: A93392 | | RunNo: 93392 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3368376 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.45 | 0.050 | 0.5000 | 0 | 90.1 | 70 | 130 | | | |
| Surr: BFB | 35 | | 20.00 | | 177 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-----------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2212630-002amsd | SampType: MSD | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: MKTF-40 | Batch ID: A93392 | | RunNo: 93392 | | | | | | | |
| Prep Date: | Analysis Date: 12/20/2022 | | SeqNo: 3368377 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.44 | 0.050 | 0.5000 | 0 | 88.3 | 70 | 130 | 2.06 | 20 | |
| Surr: BFB | 36 | | 20.00 | | 178 | 70 | 130 | 0 | 0 | S |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
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B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93394 | | RunNo: 93394 | | | | | | | |
| Prep Date: | Analysis Date: 12/19/2022 | | SeqNo: 3368489 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Toluene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 109 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 105 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93394 | | RunNo: 93394 | | | | | | | |
| Prep Date: | Analysis Date: 12/19/2022 | | SeqNo: 3368517 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

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S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93394 | | RunNo: 93394 | | | | | | | |
| Prep Date: | Analysis Date: 12/19/2022 | | SeqNo: 3368517 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.6 | | 10.00 | | 95.7 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 94.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 108 | 70 | 130 | | | |

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72036 | SampType: MBLK | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72036 | RunNo: 93376 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367172 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 61 | | 200.0 | | 30.4 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 48 | | 200.0 | | 23.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 94 | | 200.0 | | 47.2 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 38 | | 100.0 | | 38.1 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 31 | | 100.0 | | 31.3 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 74 | | 100.0 | | 73.6 | 34.4 | 134 | | | |

| Sample ID: lcs-72036 | SampType: LCS | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72036 | RunNo: 93376 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3367173 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72036 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72036 | | RunNo: 93376 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3367173 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 61 | 10 | 100.0 | 0 | 61.1 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 44 | 5.0 | 100.0 | 0 | 44.2 | 15 | 89.8 | | | |
| Phenol | 81 | 20 | 200.0 | 0 | 40.7 | 17 | 61.1 | | | |
| Pyrene | 95 | 10 | 100.0 | 0 | 95.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 95 | | 200.0 | | 47.5 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 71 | | 200.0 | | 35.7 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 140 | | 200.0 | | 71.6 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 64 | | 100.0 | | 64.4 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 56 | | 100.0 | | 56.3 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 102 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72036 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72036 | | RunNo: 93376 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3367174 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 55 | 10 | 100.0 | 0 | 55.2 | 21.3 | 104 | 10.0 | 45.3 | |
| 1,4-Dichlorobenzene | 38 | 5.0 | 100.0 | 0 | 38.1 | 15 | 89.8 | 14.9 | 39.6 | |
| Phenol | 72 | 20 | 200.0 | 0 | 36.2 | 17 | 61.1 | 11.6 | 42.5 | |
| Pyrene | 79 | 10 | 100.0 | 0 | 79.5 | 61 | 123 | 17.9 | 11.8 | R |
| Surr: 2-Fluorophenol | 66 | | 200.0 | | 33.0 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 66 | | 200.0 | | 33.0 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 100 | | 200.0 | | 50.3 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 62 | | 100.0 | | 62.1 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 53 | | 100.0 | | 53.2 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 94 | | 100.0 | | 93.5 | 34.4 | 134 | 0 | 0 | |

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PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72036 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|------------------------------|----------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72036 | RunNo: 93333 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/15/2022 | SeqNo: 3364749 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 41 | | 100.0 | | 40.8 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 78 | | 200.0 | | 39.0 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 37 | | 100.0 | | 37.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 120 | | 100.0 | | 115 | 15 | 166 | | | |

| Sample ID: lcs-72036-lf | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|----------------------------------|-------------------------------------|--------------------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72036 | RunNo: 93333 | | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | SeqNo: 3364750 | Units: µg/L | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.76 | 0.10 | 2.000 | 0 | 38.0 | 15 | 60.5 | | | |
| Naphthalene | 1.1 | 0.30 | 2.000 | 0 | 56.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 57.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.1 | 0.30 | 2.000 | 0 | 55.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 92 | | | |
| Fluorene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 96 | | | |
| Phenanthrene | 1.5 | 0.30 | 2.000 | 0 | 77.0 | 21 | 103 | | | |
| Anthracene | 1.5 | 0.30 | 2.000 | 0 | 75.0 | 21.1 | 106 | | | |
| Fluoranthene | 1.6 | 0.30 | 2.000 | 0 | 82.0 | 32.8 | 119 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 85.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 32 | 132 | | | |
| Chrysene | 1.8 | 0.30 | 2.000 | 0 | 91.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 1.8 | 0.40 | 2.000 | 0 | 90.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 1.9 | 0.30 | 2.000 | 0 | 96.0 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 71 | | 105.0 | | 68.0 | 15 | 108 | | | |

Qualifiers:

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D Sample Diluted Due to Matrix
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ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212630

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72036-lf | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSW | Batch ID: 72036 | | RunNo: 93333 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3364750 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 98 | | 210.0 | | 46.8 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 63 | | 105.0 | | 60.2 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 110 | | 105.0 | | 101 | 15 | 166 | | | |

| | | | | | | | | | | |
|---------------------------------|----------------------------------|------|-------------------------------------|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72036-lf | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72036 | | RunNo: 93333 | | | | | | | |
| Prep Date: 12/13/2022 | Analysis Date: 12/16/2022 | | SeqNo: 3364751 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.64 | 0.10 | 2.000 | 0 | 32.0 | 15 | 60.5 | 17.1 | 29.7 | |
| Naphthalene | 0.80 | 0.30 | 2.000 | 0 | 40.0 | 15 | 78.3 | 33.3 | 31.7 | R |
| 1-Methylnaphthalene | 0.76 | 0.30 | 2.000 | 0 | 38.0 | 15 | 79.6 | 40.0 | 31.4 | R |
| 2-Methylnaphthalene | 0.74 | 0.30 | 2.000 | 0 | 37.0 | 15 | 78.6 | 39.1 | 30.5 | R |
| Acenaphthene | 0.90 | 0.30 | 2.000 | 0 | 45.0 | 15 | 92 | 37.8 | 30.5 | R |
| Fluorene | 1.0 | 0.30 | 2.000 | 0 | 51.0 | 15 | 96 | 31.4 | 25.1 | R |
| Phenanthrene | 1.3 | 0.30 | 2.000 | 0 | 64.0 | 21 | 103 | 18.4 | 26.4 | |
| Anthracene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 21.1 | 106 | 14.3 | 14.4 | |
| Fluoranthene | 1.5 | 0.30 | 2.000 | 0 | 74.0 | 32.8 | 119 | 10.3 | 14.8 | |
| Pyrene | 1.5 | 1.0 | 2.000 | 0 | 76.0 | 34.1 | 110 | 11.2 | 19.2 | |
| Benz(a)anthracene | 1.7 | 0.30 | 2.000 | 0 | 83.0 | 32 | 132 | 8.09 | 29.3 | |
| Chrysene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 31.3 | 112 | 8.00 | 19 | |
| Benzo(b)fluoranthene | 1.7 | 0.40 | 2.000 | 0 | 83.0 | 34.1 | 119 | 8.09 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 1.8 | 0.30 | 2.000 | 0 | 89.0 | 24.7 | 152 | 7.57 | 21.3 | |
| Surr: Nitrobenzene-d5 | 60 | | 105.0 | | 57.1 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 90 | | 210.0 | | 43.0 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 53 | | 105.0 | | 50.4 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 85 | | 105.0 | | 80.7 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
 1901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212630**

RepthNo: **1**

Received By: **Sean Livingston** 12/9/2022 7:55:00 AM

Completed By: **Sean Livingston** 12/9/2022 12:24:08 PM

Reviewed By: **KPC 12-9-22**

Sean Livingston
Sean Livingston

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH: 14 7

(≤ 2 or > 2 unless noted)

Adjusted? NO

Checked by: [Signature]

12-9-22
3/12/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks: _____

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 2.1 | Good | | | | |
| 2 | 5.0 | Good | | | | |
| 3 | 1.5 | Good | | | | |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 09, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX (505) 632-3911

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2212913

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/15/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: 2212913
Date: 1/9/2023

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Analytical Notes Regarding EPA Method 8015D DRO/MRO:

The method blank had a low level detection for DRO. Samples with detections are flagged with a "B".

"S" flagged surrogates/spikes denote that the analyte recovery was outside of the standard limits.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene, 2-Methylnaphthalene and Naphthalene were reported by EPA Method 8270 instead of EPA Method 8270SIMs because of their elevated concentrations for samples OW-58 and DUP-12-14-22.

Analytical Notes Regarding EPA Method 8270 and 8270 SIMS:

1-Methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270SIMs because of its elevated concentration for sample NAPI-2.

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | ND | 0.0090 | 0.050 | | mg/L | 1 | 12/23/2022 1:21:55 AM | R93515 |
| Surr: BFB | 85.1 | 0 | 70-130 | | %Rec | 1 | 12/23/2022 1:21:55 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Surr: Dibromofluoromethane | 99.3 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 7:18:21 PM | R93479 |
| Surr: Toluene-d8 | 109 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 7:18:21 PM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/22/2022 3:26:05 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.025 | 0.016 | 0.064 | JB | mg/L | 1 | 12/22/2022 6:36:06 PM | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 6:36:06 PM | 72199 |
| Surr: DNOP | 107 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 6:36:06 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: 2-Fluorophenol | 36.8 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: Phenol-d5 | 28.1 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 53.4 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: Nitrobenzene-d5 | 49.0 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 43.1 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 77.0 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 1:41:24 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | ND | 0.11 | 1.0 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/20/2022 9:26:00 PM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 43.8 | 0 | 15-108 | | %Rec | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 39.5 | 0 | 15-107 | | %Rec | 1 | 12/20/2022 9:26:00 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 85.8 | 0 | 15-166 | | %Rec | 1 | 12/20/2022 9:26:00 PM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | ND | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Beryllium | 0.00080 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Nickel | ND | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Vanadium | ND | 0.0035 | 0.050 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 6:45:55 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:03:13 PM | 72141 |
| Arsenic | ND | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:03:13 PM | 72141 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:03:13 PM | 72141 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 12:44:49 P | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:24:11 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: EB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 8:30:00 AM

Lab ID: 2212913-001E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | ND | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Nickel | ND | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 1:41:38 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/15/2022 5:24:00 PM | D93335 |
| Arsenic | ND | 0.00012 | 0.0010 | | mg/L | 1 | 12/15/2022 5:24:00 PM | D93335 |
| Lead | ND | 0.000057 | 0.00050 | | mg/L | 1 | 12/15/2022 5:24:00 PM | D93335 |
| Selenium | ND | 0.00034 | 0.0010 | | mg/L | 1 | 12/15/2022 5:24:00 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:26:19 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|-----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 70 | 0.45 | 2.5 | | mg/L | 50 | 12/23/2022 1:45:09 AM | R93515 |
| Surr: BFB | 92.5 | 0 | 70-130 | | %Rec | 50 | 12/23/2022 1:45:09 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 31000 | 110 | 500 | | µg/L | 500 | 12/21/2022 7:46:57 PM | R93479 |
| Toluene | 190 | 10 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Ethylbenzene | 1400 | 11 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Methyl tert-butyl ether (MTBE) | 1200 | 20 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,2,4-Trimethylbenzene | ND | 6.1 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,3,5-Trimethylbenzene | ND | 9.1 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Isopropylbenzene | 33 | 9.1 | 50 | J | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| n-Propylbenzene | 110 | 9.1 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Xylenes, Total | 230 | 19 | 75 | | µg/L | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 103 | 0 | 70-130 | | %Rec | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Surr: Dibromofluoromethane | 90.9 | 0 | 70-130 | | %Rec | 50 | 12/21/2022 8:15:39 PM | R93479 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 50 | 12/21/2022 8:15:39 PM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/22/2022 3:41:07 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 5.8 | 0.080 | 0.32 | B | mg/L | 5 | 12/27/2022 7:15:37 PM | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.26 | 0.40 | D | mg/L | 5 | 12/27/2022 7:15:37 PM | 72199 |
| Surr: DNOP | 116 | 0 | 15.9-177 | | %Rec | 5 | 12/27/2022 7:15:37 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 1-Methylnaphthalene | 38 | 4.3 | 5.0 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 2-Methylnaphthalene | 42 | 4.2 | 5.0 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Naphthalene | 71 | 3.2 | 5.0 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: 2-Fluorophenol | 0 | 0 | 15-84.5 | S | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: Phenol-d5 | 0 | 0 | 15-67 | S | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 1.94 | 0 | 15-108 | S | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: Nitrobenzene-d5 | 38.3 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 28.9 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 56.6 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 2:23:07 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.84 | 0.11 | 1.0 | J | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Acenaphthene | 1.8 | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Fluorene | 3.0 | 0.095 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Phenanthrene | 3.5 | 0.16 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Anthracene | 0.36 | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Fluoranthene | 0.22 | 0.14 | 0.30 | J | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/20/2022 10:10:00 P | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 41.1 | 0 | 15-108 | | %Rec | 1 | 12/20/2022 10:10:00 P | 72138 |
| Surr: 2-Fluorobiphenyl | 29.8 | 0 | 15-107 | | %Rec | 1 | 12/20/2022 10:10:00 P | 72138 |
| Surr: 4-Terphenyl-d14 | 62.0 | 0 | 15-166 | | %Rec | 1 | 12/20/2022 10:10:00 P | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 4.9 | 0.0079 | 0.015 | * | mg/L | 5 | 12/21/2022 6:58:19 PM | 72141 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Nickel | 0.048 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Silver | 0.0020 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Vanadium | 0.0048 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 6:56:19 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.00053 | 0.00044 | 0.0010 | J | mg/L | 1 | 12/21/2022 4:05:40 PM | 72141 |
| Arsenic | 0.0027 | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:05:40 PM | 72141 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:05:40 PM | 72141 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 12:54:34 P | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:28:27 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-58

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 9:30:00 AM

Lab ID: 2212913-002E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 4.7 | 0.011 | 0.020 | * | mg/L | 10 | 12/23/2022 1:46:37 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Nickel | 0.045 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Silver | 0.0017 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Vanadium | 0.0032 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 1:43:45 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | 0.0027 | 0.0022 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:31:46 PM | D93335 |
| Arsenic | 0.0025 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:31:46 PM | D93335 |
| Lead | 0.00034 | 0.00028 | 0.0025 | J | mg/L | 5 | 12/15/2022 5:31:46 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:31:46 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:30:35 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.20 | 0.0090 | 0.050 | | mg/L | 1 | 12/23/2022 2:54:35 AM | R93515 |
| Surr: BFB | 235 | 0 | 70-130 | S | %Rec | 1 | 12/23/2022 2:54:35 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 2.8 | 0.23 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Methyl tert-butyl ether (MTBE) | 58 | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,2-Dichloroethane (EDC) | 7.2 | 0.25 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Isopropylbenzene | 8.5 | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| n-Butylbenzene | 0.45 | 0.25 | 3.0 | J | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| sec-Butylbenzene | 2.2 | 0.14 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 126 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Surr: 4-Bromofluorobenzene | 97.6 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Surr: Dibromofluoromethane | 96.5 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 8:44:15 PM | R93479 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 8:44:15 PM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/22/2022 3:56:06 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.95 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 7:23:06 PM | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 7:23:06 PM | 72199 |
| Surr: DNOP | 109 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 7:23:06 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: 2-Fluorophenol | 32.4 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: Phenol-d5 | 26.6 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 69.4 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: Nitrobenzene-d5 | 44.4 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 39.5 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 80.7 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 3:04:42 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.36 | 0.11 | 1.0 | J | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Phenanthrene | 0.46 | 0.16 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/20/2022 11:49:00 P | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 39.4 | 0 | 15-108 | | %Rec | 1 | 12/20/2022 11:49:00 P | 72138 |
| Surr: 2-Fluorobiphenyl | 34.0 | 0 | 15-107 | | %Rec | 1 | 12/20/2022 11:49:00 P | 72138 |
| Surr: 4-Terphenyl-d14 | 68.3 | 0 | 15-166 | | %Rec | 1 | 12/20/2022 11:49:00 P | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 1.1 | 0.0079 | 0.015 | | mg/L | 5 | 12/21/2022 7:02:20 PM | 72141 |
| Beryllium | 0.0013 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Chromium | 0.012 | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Cobalt | 0.010 | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Nickel | 0.051 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Vanadium | 0.021 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| Zinc | 0.014 | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 7:00:26 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:08:06 PM | 72141 |
| Arsenic | 0.0037 | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:08:06 PM | 72141 |
| Lead | 0.0046 | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:08:06 PM | 72141 |
| Selenium | 0.0031 | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 1:16:34 PM | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:32:45 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: OW-70

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:25:00 AM

Lab ID: 2212913-003E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.64 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Cobalt | 0.0056 | 0.0024 | 0.0060 | J | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Nickel | 0.037 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Vanadium | 0.0018 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 1:59:04 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 5:35:39 PM | D93335 |
| Arsenic | 0.0015 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:35:39 PM | D93335 |
| Lead | 0.00031 | 0.00028 | 0.0025 | J | mg/L | 5 | 12/15/2022 5:35:39 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:35:39 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:34:54 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:45:00 AM

Lab ID: 2212913-004A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 3.6 | 0.090 | 0.50 | | mg/L | 10 | 12/23/2022 3:17:41 AM | R93515 |
| Surr: BFB | 104 | 0 | 70-130 | | %Rec | 10 | 12/23/2022 3:17:41 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1400 | 4.5 | 20 | | µg/L | 20 | 12/21/2022 9:12:51 PM | R93479 |
| Toluene | 1.1 | 0.40 | 2.0 | J | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Ethylbenzene | 220 | 4.3 | 20 | | µg/L | 20 | 12/21/2022 9:12:51 PM | R93479 |
| Methyl tert-butyl ether (MTBE) | 62 | 0.79 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,2,4-Trimethylbenzene | 1.4 | 0.24 | 2.0 | J | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.36 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.51 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Acetone | ND | 5.0 | 20 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Bromomethane | ND | 1.7 | 6.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 2-Butanone | ND | 4.1 | 20 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Carbon disulfide | ND | 1.2 | 20 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Chlorobenzene | ND | 0.31 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Chloroform | ND | 0.27 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Chloromethane | ND | 0.82 | 6.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| cis-1,2-DCE | ND | 0.78 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,1-Dichloroethane | ND | 0.55 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,1-Dichloroethene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Isopropylbenzene | 18 | 0.37 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 4-Isopropyltoluene | ND | 0.40 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Methylene Chloride | ND | 1.0 | 6.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| n-Butylbenzene | 1.5 | 0.51 | 6.0 | J | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| n-Propylbenzene | 18 | 0.36 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| sec-Butylbenzene | 2.2 | 0.29 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Styrene | ND | 0.27 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Tetrachloroethene (PCE) | ND | 0.71 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| 1,1,1-Trichloroethane | ND | 0.60 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Trichloroethene (TCE) | ND | 0.41 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Vinyl chloride | ND | 0.64 | 2.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Xylenes, Total | 14 | 0.74 | 3.0 | | µg/L | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 87.8 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Surr: 4-Bromofluorobenzene | 91.2 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Surr: Dibromofluoromethane | 80.7 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 9:41:27 PM | R93479 |
| Surr: Toluene-d8 | 109 | 0 | 70-130 | | %Rec | 2 | 12/21/2022 9:41:27 PM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:45:00 AM

Lab ID: 2212913-004B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0094 | | µg/L | 1 | 12/22/2022 4:11:04 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:45:00 AM

Lab ID: 2212913-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 2.5 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 7:46:32 PM | 72199 |
| Motor Oil Range Organics (MRO) | 0.19 | 0.052 | 0.080 | | mg/L | 1 | 12/22/2022 7:46:32 PM | 72199 |
| Surr: DNOP | 105 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 7:46:32 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 1-Methylnaphthalene | 35 | 4.3 | 5.0 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: 2-Fluorophenol | 40.1 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: Phenol-d5 | 31.2 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 73.5 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: Nitrobenzene-d5 | 57.7 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 49.5 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 78.5 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 3:46:18 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 2.2 | 0.11 | 1.0 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Naphthalene | 11 | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| 2-Methylnaphthalene | 4.3 | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Acenaphthene | 1.9 | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Fluorene | 2.3 | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Phenanthrene | 0.62 | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Anthracene | 0.20 | 0.14 | 0.30 | J | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 12:32:00 A | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:45:00 AM

Lab ID: 2212913-004C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 52.5 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 12:32:00 A | 72138 |
| Surr: 2-Fluorobiphenyl | 44.4 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 12:32:00 A | 72138 |
| Surr: 4-Terphenyl-d14 | 69.8 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 12:32:00 A | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Project: 2022 GW Sampling 4th Quarter

Lab ID: 2212913-004D

Client Sample ID: NAPI-2

Collection Date: 12/14/2022 10:45:00 AM

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 3.2 | 0.0079 | 0.015 | * | mg/L | 5 | 12/21/2022 7:06:15 PM | 72141 |
| Beryllium | 0.00060 | 0.00060 | 0.0020 | J | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Nickel | 0.12 | 0.0053 | 0.010 | * | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Vanadium | 0.0076 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| Zinc | 0.0073 | 0.0039 | 0.010 | J | mg/L | 1 | 12/21/2022 7:04:19 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:10:33 PM | 72141 |
| Arsenic | 0.0020 | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:10:33 PM | 72141 |
| Lead | 0.0020 | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:10:33 PM | 72141 |
| Selenium | 0.0010 | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 1:09:13 PM | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:41:19 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-2

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 10:45:00 AM

Lab ID: 2212913-004E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 3.0 | 0.0056 | 0.010 | * | mg/L | 5 | 12/23/2022 2:05:30 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Nickel | 0.094 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Vanadium | 0.0026 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:02:18 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 5:39:32 PM | D93335 |
| Arsenic | 0.0015 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:39:32 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 5:39:32 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:39:32 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:43:27 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:15:00 AM

Lab ID: 2212913-005A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.20 | 0.0090 | 0.050 | | mg/L | 1 | 12/23/2022 3:40:47 AM | R93515 |
| Surr: BFB | 147 | 0 | 70-130 | S | %Rec | 1 | 12/23/2022 3:40:47 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | 1.2 | 0.23 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Ethylbenzene | 8.9 | 0.21 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Methyl tert-butyl ether (MTBE) | 87 | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Isopropylbenzene | 2.1 | 0.18 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| n-Propylbenzene | 0.83 | 0.18 | 1.0 | J | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| sec-Butylbenzene | 0.93 | 0.14 | 1.0 | J | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/21/2022 10:10:00 P | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 98.6 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 10:10:00 P | R93479 |
| Surr: 4-Bromofluorobenzene | 98.5 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 10:10:00 P | R93479 |
| Surr: Dibromofluoromethane | 89.7 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 10:10:00 P | R93479 |
| Surr: Toluene-d8 | 110 | 0 | 70-130 | | %Rec | 1 | 12/21/2022 10:10:00 P | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:15:00 AM

Lab ID: 2212913-005B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0092 | | µg/L | 1 | 12/22/2022 4:26:02 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:15:00 AM

Lab ID: 2212913-005C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.79 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 8:10:17 PM | 72199 |
| Motor Oil Range Organics (MRO) | 0.070 | 0.052 | 0.080 | J | mg/L | 1 | 12/22/2022 8:10:17 PM | 72199 |
| Surr: DNOP | 99.6 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 8:10:17 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: 2-Fluorophenol | 33.4 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: Phenol-d5 | 25.9 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 59.0 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: Nitrobenzene-d5 | 44.8 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 38.2 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 68.0 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 4:27:37 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.42 | 0.11 | 1.0 | J | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Acenaphthene | 0.36 | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 1:14:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** NAPI-3**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/14/2022 11:15:00 AM**Lab ID:** 2212913-005C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 42.9 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 34.9 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 1:14:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 64.1 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 1:14:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:15:00 AM

Lab ID: 2212913-005D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 1.6 | 0.0079 | 0.015 | | mg/L | 5 | 12/21/2022 7:10:16 PM | 72141 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Nickel | 0.025 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Silver | 0.0021 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Vanadium | 0.0038 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 7:08:21 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:12:59 PM | 72141 |
| Arsenic | 0.0030 | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:12:59 PM | 72141 |
| Lead | 0.00043 | 0.00019 | 0.00050 | J | mg/L | 1 | 12/21/2022 4:12:59 PM | 72141 |
| Selenium | 0.0015 | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 1:14:07 PM | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:45:36 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: NAPI-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:15:00 AM

Lab ID: 2212913-005E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 1.4 | 0.0056 | 0.010 | | mg/L | 5 | 12/23/2022 2:11:48 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Nickel | 0.019 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Silver | 0.0015 | 0.0013 | 0.0050 | J | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Vanadium | ND | 0.0017 | 0.050 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:08:35 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 5:43:25 PM | D93335 |
| Arsenic | 0.0021 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:43:25 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 5:43:25 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:43:25 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:47:44 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: RAA | |
| Gasoline Range Organics (GRO) | 0.071 | 0.0090 | 0.050 | | mg/L | 1 | 12/23/2022 4:03:52 AM | R93515 |
| Surr: BFB | 89.8 | 0 | 70-130 | | %Rec | 1 | 12/23/2022 4:03:52 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Methyl tert-butyl ether (MTBE) | 74 | 0.39 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/22/2022 12:32:47 A | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 12:32:47 A | R93479 |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 12:32:47 A | R93479 |
| Surr: Dibromofluoromethane | 96.8 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 12:32:47 A | R93479 |
| Surr: Toluene-d8 | 107 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 12:32:47 A | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0027 | 0.0095 | | µg/L | 1 | 12/22/2022 4:56:06 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 0.57 | 0.016 | 0.064 | B | mg/L | 1 | 12/22/2022 8:34:08 PM | 72199 |
| Motor Oil Range Organics (MRO) | 0.078 | 0.052 | 0.080 | J | mg/L | 1 | 12/22/2022 8:34:08 PM | 72199 |
| Surr: DNOP | 111 | 0 | 15.9-177 | | %Rec | 1 | 12/22/2022 8:34:08 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Phenol | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: 2-Fluorophenol | 35.9 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: Phenol-d5 | 28.4 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 66.8 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: Nitrobenzene-d5 | 49.2 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 43.5 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 72.7 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 5:09:05 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.42 | 0.11 | 1.0 | J | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Naphthalene | ND | 0.20 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| 1-Methylnaphthalene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| 2-Methylnaphthalene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Acenaphthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Fluorene | ND | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Phenanthrene | ND | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Anthracene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Fluoranthene | ND | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 1:57:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 51.0 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 44.2 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 1:57:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 79.6 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 1:57:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 0.18 | 0.0016 | 0.0030 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Nickel | 0.023 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Silver | ND | 0.0018 | 0.0050 | | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Vanadium | 0.023 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| Zinc | 0.0046 | 0.0039 | 0.010 | J | mg/L | 1 | 12/21/2022 7:12:34 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:15:26 PM | 72141 |
| Arsenic | 0.00062 | 0.00022 | 0.0010 | J | mg/L | 1 | 12/21/2022 4:15:26 PM | 72141 |
| Lead | 0.00053 | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:15:26 PM | 72141 |
| Selenium | 0.0026 | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 1:19:01 PM | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:49:53 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: KA-3

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-006E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 0.16 | 0.0011 | 0.0020 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Nickel | 0.019 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Vanadium | 0.017 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| Zinc | 0.0098 | 0.0032 | 0.010 | J | mg/L | 1 | 12/23/2022 2:14:52 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 5:55:06 PM | D93335 |
| Arsenic | 0.00064 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:55:06 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 5:55:06 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:55:06 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:52:00 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: FB-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022 11:30:00 AM

Lab ID: 2212913-007A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|--------------------------------|--------|------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8260B: VOLATILES | | | | | | | Analyst: JR | |
| Benzene | ND | 0.23 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Toluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Ethylbenzene | ND | 0.21 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Methyl tert-butyl ether (MTBE) | ND | 0.39 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,2,4-Trimethylbenzene | ND | 0.12 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,3,5-Trimethylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 0.25 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Acetone | ND | 2.5 | 10 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Bromomethane | ND | 0.85 | 3.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 2-Butanone | ND | 2.0 | 10 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Carbon disulfide | ND | 0.59 | 10 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Chlorobenzene | ND | 0.16 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Chloroform | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Chloromethane | ND | 0.41 | 3.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| cis-1,2-DCE | ND | 0.39 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,1-Dichloroethane | ND | 0.27 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,1-Dichloroethene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Isopropylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 4-Isopropyltoluene | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Methylene Chloride | ND | 0.50 | 3.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| n-Butylbenzene | ND | 0.25 | 3.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| n-Propylbenzene | ND | 0.18 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| sec-Butylbenzene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Styrene | ND | 0.14 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Tetrachloroethene (PCE) | ND | 0.36 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| 1,1,1-Trichloroethane | ND | 0.30 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Trichloroethene (TCE) | ND | 0.20 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Vinyl chloride | ND | 0.32 | 1.0 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Xylenes, Total | ND | 0.37 | 1.5 | | µg/L | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 106 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Surr: Dibromofluoromethane | 98.9 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 1:01:17 AM | R93479 |
| Surr: Toluene-d8 | 108 | 0 | 70-130 | | %Rec | 1 | 12/22/2022 1:01:17 AM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022

Lab ID: 2212913-008A

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|------|--------|------|-------|--------------|-----------------------|----------|
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | Analyst: RAA | | |
| Gasoline Range Organics (GRO) | 68 | 0.45 | 2.5 | | mg/L | 50 | 12/23/2022 4:26:56 AM | R93515 |
| Surr: BFB | 88.6 | 0 | 70-130 | | %Rec | 50 | 12/23/2022 4:26:56 AM | R93515 |
| EPA METHOD 8260B: VOLATILES | | | | | | Analyst: JR | | |
| Benzene | 30000 | 110 | 500 | | µg/L | 500 | 12/22/2022 12:22:26 P | R93506 |
| Toluene | 280 | 10 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Ethylbenzene | 1400 | 11 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Methyl tert-butyl ether (MTBE) | 1100 | 20 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,2,4-Trimethylbenzene | 47 | 6.1 | 50 | J | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,3,5-Trimethylbenzene | 23 | 9.1 | 50 | J | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,2-Dichloroethane (EDC) | ND | 13 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Acetone | ND | 130 | 500 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Bromomethane | ND | 43 | 150 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 2-Butanone | ND | 100 | 500 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Carbon disulfide | ND | 30 | 500 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Chlorobenzene | ND | 7.8 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Chloroform | ND | 6.7 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Chloromethane | ND | 21 | 150 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| cis-1,2-DCE | ND | 19 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,1-Dichloroethane | ND | 14 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,1-Dichloroethene | ND | 10 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Isopropylbenzene | 34 | 9.1 | 50 | J | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 4-Isopropyltoluene | ND | 10 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Methylene Chloride | ND | 25 | 150 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| n-Butylbenzene | ND | 13 | 150 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| n-Propylbenzene | 110 | 9.1 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| sec-Butylbenzene | ND | 7.2 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Styrene | ND | 6.8 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Tetrachloroethene (PCE) | ND | 18 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| 1,1,1-Trichloroethane | ND | 15 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Trichloroethene (TCE) | ND | 10 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Vinyl chloride | ND | 16 | 50 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Xylenes, Total | 360 | 19 | 75 | | µg/L | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Surr: 1,2-Dichloroethane-d4 | 107 | 0 | 70-130 | | %Rec | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Surr: 4-Bromofluorobenzene | 102 | 0 | 70-130 | | %Rec | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Surr: Dibromofluoromethane | 88.8 | 0 | 70-130 | | %Rec | 50 | 12/22/2022 1:29:48 AM | R93479 |
| Surr: Toluene-d8 | 106 | 0 | 70-130 | | %Rec | 50 | 12/22/2022 1:29:48 AM | R93479 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022

Lab ID: 2212913-008B

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------|--------|--------|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8011/504.1: EDB | | | | | | | Analyst: mb | |
| 1,2-Dibromoethane | ND | 0.0026 | 0.0093 | | µg/L | 1 | 12/22/2022 5:38:30 PM | 72230 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022

Lab ID: 2212913-008C

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|-------|----------|------|-------|----|-----------------------|----------|
| EPA METHOD 8015D MOD: DIESEL RANGE | | | | | | | Analyst: SB | |
| Diesel Range Organics (DRO) | 7.7 | 0.080 | 0.32 | B | mg/L | 5 | 12/27/2022 7:39:13 PM | 72199 |
| Motor Oil Range Organics (MRO) | ND | 0.26 | 0.40 | D | mg/L | 5 | 12/27/2022 7:39:13 PM | 72199 |
| Surr: DNOP | 124 | 0 | 15.9-177 | | %Rec | 5 | 12/27/2022 7:39:13 PM | 72199 |
| EPA METHOD 8270C: SEMIVOLATILES | | | | | | | Analyst: DAM | |
| Benzoic acid | ND | 18 | 20 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Bis(2-ethylhexyl)phthalate | ND | 8.4 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Di-n-butyl phthalate | ND | 7.7 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Di-n-octyl phthalate | ND | 12 | 20 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 1,4-Dichlorobenzene | ND | 2.4 | 5.0 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Diethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Dimethyl phthalate | ND | 6.0 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 2,4-Dimethylphenol | ND | 5.8 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 2,4-Dinitrophenol | ND | 16 | 20 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 1-Methylnaphthalene | 49 | 4.3 | 5.0 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 2-Methylnaphthalene | 55 | 4.2 | 5.0 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 2-Methylphenol | ND | 5.0 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 3+4-Methylphenol | ND | 5.1 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Naphthalene | 97 | 3.2 | 5.0 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Phenol | 50 | 18 | 20 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Pyridine | ND | 14 | 40 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| 2,4,6-Trichlorophenol | ND | 5.9 | 10 | | µg/L | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: 2-Fluorophenol | 33.4 | 0 | 15-84.5 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: Phenol-d5 | 30.2 | 0 | 15-67 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: 2,4,6-Tribromophenol | 63.9 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: Nitrobenzene-d5 | 50.4 | 0 | 16.8-112 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: 2-Fluorobiphenyl | 40.4 | 0 | 15-101 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| Surr: 4-Terphenyl-d14 | 72.7 | 0 | 34.4-134 | | %Rec | 1 | 12/21/2022 5:50:16 PM | 72138 |
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| 1,4-Dioxane | 0.94 | 0.11 | 1.0 | J | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Acenaphthene | 2.0 | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Fluorene | 2.9 | 0.095 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Phenanthrene | 2.9 | 0.16 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Anthracene | 0.32 | 0.14 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Fluoranthene | 0.18 | 0.14 | 0.30 | J | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Pyrene | ND | 0.32 | 1.0 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Benz(a)anthracene | ND | 0.15 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Chrysene | ND | 0.25 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Benzo(b)fluoranthene | ND | 0.14 | 0.40 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Indeno(1,2,3-cd)pyrene | ND | 0.23 | 0.30 | | µg/L | 1 | 12/21/2022 2:40:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Marathon**Client Sample ID:** DUP-12-14-22**Project:** 2022 GW Sampling 4th Quarter**Collection Date:** 12/14/2022**Lab ID:** 2212913-008C**Matrix:** Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---------------------------|--------|-----|--------|------|-------|----|-----------------------|----------|
| EPA METHOD 8270SIM | | | | | | | Analyst: DAM | |
| Surr: Nitrobenzene-d5 | 48.7 | 0 | 15-108 | | %Rec | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Surr: 2-Fluorobiphenyl | 34.9 | 0 | 15-107 | | %Rec | 1 | 12/21/2022 2:40:00 AM | 72138 |
| Surr: 4-Terphenyl-d14 | 66.9 | 0 | 15-166 | | %Rec | 1 | 12/21/2022 2:40:00 AM | 72138 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|--------------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022

Lab ID: 2212913-008D

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|----------------------------------|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: METALS | | | | | | | Analyst: VP | |
| Barium | 5.3 | 0.016 | 0.030 | * | mg/L | 10 | 12/30/2022 10:32:34 A | 72141 |
| Beryllium | ND | 0.00060 | 0.0020 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Cadmium | ND | 0.0018 | 0.0020 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Cobalt | ND | 0.0035 | 0.0060 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Nickel | 0.048 | 0.0053 | 0.010 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Silver | 0.0020 | 0.0018 | 0.0050 | J | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Vanadium | 0.0050 | 0.0035 | 0.050 | J | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| Zinc | ND | 0.0039 | 0.010 | | mg/L | 1 | 12/21/2022 7:24:44 PM | 72141 |
| EPA 200.8: METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.00044 | 0.0010 | | mg/L | 1 | 12/21/2022 4:17:53 PM | 72141 |
| Arsenic | 0.0028 | 0.00022 | 0.0010 | | mg/L | 1 | 12/21/2022 4:17:53 PM | 72141 |
| Lead | ND | 0.00019 | 0.00050 | | mg/L | 1 | 12/21/2022 4:17:53 PM | 72141 |
| Selenium | ND | 0.00089 | 0.0010 | | mg/L | 1 | 12/28/2022 1:21:27 PM | 72141 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 2:54:09 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |

Analytical Report

Lab Order: 2212913

Date Reported: 1/9/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Marathon

Client Sample ID: DUP-12-14-22

Project: 2022 GW Sampling 4th Quarter

Collection Date: 12/14/2022

Lab ID: 2212913-008E

Matrix: Groundwater

| Analyses | Result | MDL | RL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|--------|----------|---------|------|-------|----|-----------------------|----------|
| EPA METHOD 200.7: DISSOLVED METALS | | | | | | | Analyst: ELS | |
| Barium | 4.8 | 0.011 | 0.020 | * | mg/L | 10 | 12/23/2022 2:21:06 PM | C93558 |
| Beryllium | ND | 0.00059 | 0.0020 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Cadmium | ND | 0.00098 | 0.0020 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Chromium | ND | 0.0020 | 0.0060 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Cobalt | ND | 0.0024 | 0.0060 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Nickel | 0.045 | 0.0033 | 0.010 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Silver | ND | 0.0013 | 0.0050 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Vanadium | 0.0033 | 0.0017 | 0.050 | J | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| Zinc | ND | 0.0032 | 0.010 | | mg/L | 1 | 12/23/2022 2:18:03 PM | C93558 |
| EPA 200.8: DISSOLVED METALS | | | | | | | Analyst: bcv | |
| Antimony | ND | 0.0022 | 0.0050 | | mg/L | 5 | 12/15/2022 5:58:59 PM | D93335 |
| Arsenic | 0.0032 | 0.00061 | 0.0050 | J | mg/L | 5 | 12/15/2022 5:58:59 PM | D93335 |
| Lead | ND | 0.00028 | 0.0025 | | mg/L | 5 | 12/15/2022 5:58:59 PM | D93335 |
| Selenium | ND | 0.0017 | 0.0050 | | mg/L | 5 | 12/15/2022 5:58:59 PM | D93335 |
| EPA METHOD 245.1: MERCURY | | | | | | | Analyst: VP | |
| Mercury | ND | 0.000091 | 0.00020 | | mg/L | 1 | 12/20/2022 3:00:34 PM | 72202 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |



ANALYTICAL REPORT

December 20, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1568364

Samples Received: 12/16/2022

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

| | |
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| Sr: Sample Results | 5 |
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2212913-001F EB-12-14-22 L1568364-01 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:42 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2212913-002F OW-58 L1568364-02 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:43 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212913-003F OW-70 L1568364-03 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:48 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212913-004F NAPI-2 L1568364-04 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:49 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212913-005F NAPI-3 L1568364-05 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:51 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212913-006F KA-3 L1568364-06 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:52 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

2212913-008F DUP-12-14-22 L1568364-07 WW

| | | | | | | |
|---------------------------------------|-----------|----------|-----------------------|--------------------|---------|----------------|
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
| Wet Chemistry by Method 4500CN E-2016 | WG1976252 | 1 | 12/18/22 23:02 | 12/20/22 13:53 | LDT | Mt. Juliet, TN |

Collected by
Collected date/time
Received date/time

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/20/2022 13:42 | WG1976252 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/14/22 09:30

L1568364

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|--------------------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | J6 | 0.00500 | 1 | 12/20/2022 13:43 | WG1976252 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/20/2022 13:48 | WG1976252 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0130 | | 0.00500 | 1 | 12/20/2022 13:49 | WG1976252 |

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 12/14/22 11:15

L1568364

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.0101 | | 0.00500 | 1 | 12/20/2022 13:51 | WG1976252 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Collected date/time: 12/14/22 11:30

L1568364

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|---------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | 0.00704 | | 0.00500 | 1 | 12/20/2022 13:52 | WG1976252 |

- 1Cp
- 2Tc
- 3Ss
- 4Cn
- 5Sr
- 6Qc
- 7Gl
- 8Al
- 9Sc

Wet Chemistry by Method 4500CN E-2016

| Analyte | Result | Qualifier | RDL | Dilution | Analysis date / time | Batch |
|---------|--------|-----------|---------|----------|----------------------|---------------------------|
| Cyanide | ND | | 0.00500 | 1 | 12/20/2022 13:53 | WG1976252 |

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2016

[L1568364-01,02,03,04,05,06,07](#)

Method Blank (MB)

(MB) R3873891-1 12/20/22 13:35

| Analyte | MB Result
mg/l | MB Qualifier | MB MDL
mg/l | MB RDL
mg/l |
|---------|-------------------|--------------|----------------|----------------|
| Cyanide | U | | 0.00180 | 0.00500 |

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1568351-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1568351-01 12/20/22 13:40 • (DUP) R3873891-3 12/20/22 13:41

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | ND | ND | 1 | 0.000 | | 20 |

L1568364-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1568364-04 12/20/22 13:49 • (DUP) R3873891-6 12/20/22 13:50

| Analyte | Original Result
mg/l | DUP Result
mg/l | Dilution | DUP RPD
% | DUP Qualifier | DUP RPD
Limits
% |
|---------|-------------------------|--------------------|----------|--------------|---------------|------------------------|
| Cyanide | 0.0130 | 0.0117 | 1 | 10.5 | | 20 |

Laboratory Control Sample (LCS)

(LCS) R3873891-2 12/20/22 13:36

| Analyte | Spike Amount
mg/l | LCS Result
mg/l | LCS Rec.
% | Rec. Limits
% | LCS Qualifier |
|---------|----------------------|--------------------|---------------|------------------|---------------|
| Cyanide | 0.100 | 0.0954 | 95.4 | 87.1-120 | |

L1568364-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1568364-02 12/20/22 13:43 • (MS) R3873891-4 12/20/22 13:44 • (MSD) R3873891-5 12/20/22 13:47

| Analyte | Spike Amount
mg/l | Original Result
mg/l | MS Result
mg/l | MSD Result
mg/l | MS Rec.
% | MSD Rec.
% | Dilution | Rec. Limits
% | MS Qualifier | MSD Qualifier | RPD
% | RPD Limits
% |
|---------|----------------------|-------------------------|-------------------|--------------------|--------------|---------------|----------|------------------|--------------|---------------|----------|-----------------|
| Cyanide | 0.100 | ND | 0.0941 | 0.0949 | 89.9 | 90.7 | 1 | 90.0-110 | J6 | | 0.847 | 20 |

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

| | |
|------------------------------|--|
| MDL | Method Detection Limit. |
| ND | Not detected at the Reporting Limit (or MDL where applicable). |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

QualifierDescription

| | |
|----|---|
| J6 | The sample matrix interfered with the ability to make any accurate determination; spike value is low. |
|----|---|

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

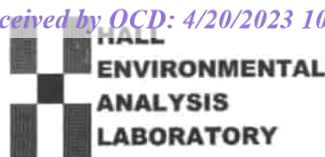
| | | | |
|--------------------------------|-------------|-----------------------------|------------------|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN000032021-1 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey--NELAP | TN002 |
| California | 2932 | New Mexico ¹ | TN00003 |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina ¹ | DW21704 |
| Georgia | NELAP | North Carolina ³ | 41 |
| Georgia ¹ | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio--VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LA000356 |
| Kentucky ^{1 6} | KY90010 | South Carolina | 84004002 |
| Kentucky ² | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee ^{1 4} | 2006 |
| Louisiana | LA018 | Texas | T104704245-20-18 |
| Maine | TN00003 | Texas ⁵ | LAB0152 |
| Maryland | 324 | Utah | TN000032021-11 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 110033 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 998093910 |
| Montana | CERT0086 | Wyoming | A2LA |
| A2LA -- ISO 17025 | 1461.01 | AIHA-LAP, LLC EMLAP | 100789 |
| A2LA -- ISO 17025 ⁵ | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA--Crypto | TN00003 | | |

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975

FAX: 505-345-4107

Website: www.hallenvironmental.com

M174

| SUB CONTRACTOR: Pace TN | | COMPANY: PACE TN | | PHONE: (800) 767-5859 | | FAX: (615) 758-5859 | |
|---|--------------|-------------------------|---------------------|------------------------------|------------------------|----------------------------|------------------------------|
| ADDRESS: 12065 Lebanon Rd | | | | ACCOUNT #: | | EMAIL: | |
| CITY, STATE, ZIP: Mt. Juliet, TN 37122 | | | | 61568364 | | | |
| ITEM | SAMPLE | CLIENT SAMPLE ID | BOTTLE TYPE | MATRIX | COLLECTION DATE | # CONTAINERS | ANALYTICAL COMMENTS |
| 1 | 2212913-001F | EB-12-14-22 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 8:30:00 AM | 1 | Total Cyanide J and MDL - 01 |
| 2 | 2212913-002F | OW-58 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 9:30:00 AM | 1 | Total Cyanide J and MDL - 02 |
| 3 | 2212913-003F | OW-70 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 10:25:00 AM | 1 | Total Cyanide J and MDL - 03 |
| 4 | 2212913-004F | NAPI-2 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 10:45:00 AM | 1 | Total Cyanide J and MDL - 04 |
| 5 | 2212913-005F | NAPI-3 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 11:15:00 AM | 1 | Total Cyanide J and MDL - 05 |
| 6 | 2212913-006F | KA-3 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 11:30:00 AM | 1 | Total Cyanide J and MDL - 06 |
| 7 | 2212913-008F | DUP-12-14-22 | 500AMBHDP
F.NAOH | Groundw
ater | 12/14/2022 | 1 | Total Cyanide J and MDL - 07 |

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 COC Signed/Accurate: ☒ Y ☐ N VOA Zero Headspace: ☐ Y ☒ N
 Bottles arrive intact: ☒ Y ☐ N Pres. Correct/Check: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

7707 9746 0714

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

OK

| | | | | | | | |
|--|-------------------------|----------------------|------------------------|-----------------------|-------------------|--|--|
| Relinquished By: SA | Date: 12/15/2022 | Time: 8:43 AM | Received By: | Date: | Time: | REPORT TRANSMITTAL DESIRED: | |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: | ☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE | |
| Relinquished By: | Date: | Time: | Received By: SA | Date: 12-16-22 | Time: 9:00 | FOR LAB USE ONLY | |
| TAT: Standard ☒ RUSH ☐ Next BD ☐ 2nd BD ☐ 3rd BD ☐ | | | | | | Temp of samples _____ °C Attempt to Cool? _____ | |
| | | | | | | Comments: _____ | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-72141 | SampType: MBLK | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: PBW | Batch ID: 72141 | RunNo: 93406 | | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/19/2022 | SeqNo: 3368551 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0030 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-72141 | SampType: LCSLL | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: 72141 | RunNo: 93406 | | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/19/2022 | SeqNo: 3368552 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0019 | 0.0030 | 0.002000 | 0 | 92.7 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 99.8 | 50 | 150 | | | J |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.1 | 50 | 150 | | | J |
| Chromium | 0.0055 | 0.0060 | 0.006000 | 0 | 92.2 | 50 | 150 | | | J |
| Cobalt | 0.0066 | 0.0060 | 0.006000 | 0 | 110 | 50 | 150 | | | |
| Nickel | 0.0045 | 0.010 | 0.005000 | 0 | 90.8 | 50 | 150 | | | J |
| Silver | 0.0055 | 0.0050 | 0.005000 | 0 | 110 | 50 | 150 | | | |
| Vanadium | 0.010 | 0.050 | 0.01000 | 0 | 102 | 50 | 150 | | | J |
| Zinc | 0.0070 | 0.010 | 0.01000 | 0 | 69.7 | 50 | 150 | | | J |

| | | | | | | | | | | |
|------------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-72141 | SampType: LCS | TestCode: EPA Method 200.7: Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: 72141 | RunNo: 93406 | | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/19/2022 | SeqNo: 3368553 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.53 | 0.0030 | 0.5000 | 0 | 105 | 85 | 115 | | | |
| Beryllium | 0.52 | 0.0020 | 0.5000 | 0 | 104 | 85 | 115 | | | |
| Cadmium | 0.51 | 0.0020 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Chromium | 0.51 | 0.0060 | 0.5000 | 0 | 102 | 85 | 115 | | | |
| Cobalt | 0.51 | 0.0060 | 0.5000 | 0 | 101 | 85 | 115 | | | |
| Nickel | 0.50 | 0.010 | 0.5000 | 0 | 99.9 | 85 | 115 | | | |
| Silver | 0.11 | 0.0050 | 0.1000 | 0 | 106 | 85 | 115 | | | |
| Vanadium | 0.52 | 0.050 | 0.5000 | 0 | 103 | 85 | 115 | | | |
| Zinc | 0.49 | 0.010 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: MB-C | SampType: MBLK | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: PBW | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375409 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | ND | 0.0020 | | | | | | | | |
| Beryllium | ND | 0.0020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Cobalt | ND | 0.0060 | | | | | | | | |
| Nickel | ND | 0.010 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Vanadium | ND | 0.050 | | | | | | | | |
| Zinc | ND | 0.010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-C | SampType: LCSLL | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: BatchQC | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375410 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.0018 | 0.0020 | 0.002000 | 0 | 89.6 | 50 | 150 | | | J |
| Beryllium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.9 | 50 | 150 | | | J |
| Cadmium | 0.0020 | 0.0020 | 0.002000 | 0 | 98.6 | 50 | 150 | | | J |
| Cobalt | 0.0075 | 0.0060 | 0.006000 | 0 | 125 | 50 | 150 | | | |
| Nickel | 0.0068 | 0.010 | 0.005000 | 0 | 137 | 50 | 150 | | | J |
| Silver | 0.0049 | 0.0050 | 0.005000 | 0 | 98.7 | 50 | 150 | | | J |
| Vanadium | 0.0092 | 0.050 | 0.01000 | 0 | 91.7 | 50 | 150 | | | J |
| Zinc | 0.010 | 0.010 | 0.01000 | 0 | 104 | 50 | 150 | | | |

| | | | | | | | | | | |
|-------------------------|----------------------------------|---|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: LCS-C | SampType: LCS | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | | |
| Client ID: LCSW | Batch ID: C93558 | RunNo: 93558 | | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | SeqNo: 3375411 Units: mg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 0.47 | 0.0020 | 0.5000 | 0 | 94.3 | 85 | 115 | | | |
| Beryllium | 0.50 | 0.0020 | 0.5000 | 0 | 100 | 85 | 115 | | | |
| Cadmium | 0.47 | 0.0020 | 0.5000 | 0 | 93.2 | 85 | 115 | | | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0 | 92.1 | 85 | 115 | | | |
| Cobalt | 0.45 | 0.0060 | 0.5000 | 0 | 89.8 | 85 | 115 | | | |
| Nickel | 0.47 | 0.010 | 0.5000 | 0 | 93.1 | 85 | 115 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 102 | 85 | 115 | | | |
| Vanadium | 0.49 | 0.050 | 0.5000 | 0 | 98.2 | 85 | 115 | | | |
| Zinc | 0.45 | 0.010 | 0.5000 | 0 | 91.0 | 85 | 115 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------|----------------------------------|--------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSLL-C | SampType: LCSLL | | TestCode: EPA Method 200.7: Dissolved Metals | | | | | | | |
| Client ID: BatchQC | Batch ID: C93558 | | RunNo: 93558 | | | | | | | |
| Prep Date: | Analysis Date: 12/23/2022 | | SeqNo: 3375416 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chromium | 0.0030 | 0.0060 | 0.006000 | 0 | 50.7 | 50 | 150 | | | J |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------|--------|---------------------------|-----------|-----------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: MB-72141 | | SampType: MBLK | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: PBW | | Batch ID: 72141 | | RunNo: 93483 | | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/21/2022 | | SeqNo: 3371597 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | ND | 0.0010 | | | | | | | | |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------------|---------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCSLL-72141 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 72141 | | | RunNo: 93483 | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/21/2022 | | | SeqNo: 3371598 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00082 | 0.0010 | 0.001000 | 0 | 81.6 | 50 | 150 | | | J |
| Arsenic | 0.00097 | 0.0010 | 0.001000 | 0 | 96.6 | 50 | 150 | | | J |
| Lead | 0.00048 | 0.00050 | 0.0005000 | 0 | 97.0 | 50 | 150 | | | J |

| | | | | | | | | | | |
|-------------------------------|--------|----------------------------------|-----------|------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: MSLCS-72141 | | SampType: LCS | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: LCSW | | Batch ID: 72141 | | | RunNo: 93483 | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/21/2022 | | | SeqNo: 3371599 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.025 | 0.0010 | 0.02500 | 0 | 100 | 85 | 115 | | | |
| Arsenic | 0.023 | 0.0010 | 0.02500 | 0 | 93.0 | 85 | 115 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 99.6 | 85 | 115 | | | |
| Selenium | 0.021 | 0.0010 | 0.02500 | 0 | 85.7 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------------|--------|----------------------------------|-----------|------------------------------------|------|--------------------|-----------|------|----------|------|
| Sample ID: MSLCSLL-72141 | | SampType: LCSLL | | TestCode: EPA 200.8: Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: 72141 | | RunNo: 93483 | | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/21/2022 | | SeqNo: 3371603 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Selenium | 0.0010 | 0.0010 | 0.001000 | 0 | 100 | 50 | 150 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|----------------------------|--------|---------------------------|-----------|---------------------------------------|------|-------------|-----------|------|----------|------|
| Sample ID: 2212913-001EMSL | | SampType: MS | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: EB-12-14-22 | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3365040 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.022 | 0.0010 | 0.02500 | 0 | 89.4 | 70 | 130 | | | |
| Arsenic | 0.025 | 0.0010 | 0.02500 | 0 | 101 | 70 | 130 | | | |
| Lead | 0.012 | 0.00050 | 0.01250 | 0 | 96.9 | 70 | 130 | | | |
| Selenium | 0.027 | 0.0010 | 0.02500 | 0 | 109 | 70 | 130 | | | |

| | | | | | | | | | | |
|----------------|---------|---------------------------|-----------|-------------|---------------------------------------|----------|-------------|------|----------|------|
| Sample ID: MB | | SampType: MBLK | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: PBW | | Batch ID: D93335 | | | RunNo: 93335 | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | | SeqNo: 3367248 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.00050 | 0.0010 | | | | | | | | J |
| Arsenic | ND | 0.0010 | | | | | | | | |
| Lead | ND | 0.00050 | | | | | | | | |
| Selenium | ND | 0.0010 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|---------|----------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3367249 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.0011 | 0.0010 | 0.001000 | 0 | 105 | 50 | 150 | | | |
| Lead | 0.00058 | 0.00050 | 0.0005000 | 0 | 117 | 50 | 150 | | | |

| | | | | | | | | | | |
|------------------------|--------|----------------------------------|-----------|-------------|--|----------|--------------------|------|----------|------|
| Sample ID: LCS | | SampType: LCS | | | TestCode: EPA 200.8: Dissolved Metals | | | | | |
| Client ID: LCSW | | Batch ID: D93335 | | | RunNo: 93335 | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | | SeqNo: 3367250 | | Units: mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.023 | 0.0010 | 0.02500 | 0 | 93.0 | 85 | 115 | | | |
| Arsenic | 0.024 | 0.0010 | 0.02500 | 0 | 97.9 | 85 | 115 | | | |
| Lead | 0.013 | 0.00050 | 0.01250 | 0 | 101 | 85 | 115 | | | |
| Selenium | 0.026 | 0.0010 | 0.02500 | 0 | 104 | 85 | 115 | | | |

| | | | | | | | | | | |
|---------------------------|--------|----------------------------------|-----------|--|------|--------------------|-----------|------|----------|------|
| Sample ID: LCSLL | | SampType: LCSLL | | TestCode: EPA 200.8: Dissolved Metals | | | | | | |
| Client ID: BatchQC | | Batch ID: D93335 | | RunNo: 93335 | | | | | | |
| Prep Date: | | Analysis Date: 12/15/2022 | | SeqNo: 3367251 | | Units: mg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Antimony | 0.0012 | 0.0010 | 0.001000 | 0 | 116 | 50 | 150 | | | |
| Selenium | 0.0011 | 0.0010 | 0.001000 | 0 | 108 | 50 | 150 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72202 | SampType: MBLK | TestCode: EPA Method 245.1: Mercury |
| Client ID: PBW | Batch ID: 72202 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369564 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | ND | 0.00020 |

| | | |
|-------------------------------|----------------------------------|--|
| Sample ID: LCSLL-72202 | SampType: LCSLL | TestCode: EPA Method 245.1: Mercury |
| Client ID: BatchQC | Batch ID: 72202 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369565 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.00021 | 0.00020 0.0001500 0 138 50 150 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72202 | SampType: LCS | TestCode: EPA Method 245.1: Mercury |
| Client ID: LCSW | Batch ID: 72202 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369566 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0055 | 0.00020 0.005000 0 111 85 115 |

| | | |
|----------------------------------|----------------------------------|--|
| Sample ID: 2212913-008DMS | SampType: MS | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-12-14-22 | Batch ID: 72202 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369616 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0040 | 0.00020 0.005000 0 79.4 75 125 |

| | | |
|-----------------------------------|----------------------------------|--|
| Sample ID: 2212913-008DMSD | SampType: MSD | TestCode: EPA Method 245.1: Mercury |
| Client ID: DUP-12-14-22 | Batch ID: 72202 | RunNo: 93426 |
| Prep Date: 12/20/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369617 Units: mg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| Mercury | 0.0040 | 0.00020 0.005000 0 79.4 75 125 0.0893 20 |

Qualifiers:

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PQL Practical Quantitative Limit
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J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72230 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72230 | RunNo: 93603 |
| Prep Date: 12/21/2022 | Analysis Date: 12/22/2022 | SeqNo: 3377572 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: LCS-72230 | SampType: LCS | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: LCSW | Batch ID: 72230 | RunNo: 93603 |
| Prep Date: 12/21/2022 | Analysis Date: 12/22/2022 | SeqNo: 3377574 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | 0.12 | 0.010 0.1000 0 125 70 130 |

| | | |
|------------------------------|----------------------------------|--|
| Sample ID: MB-72230 | SampType: MBLK | TestCode: EPA Method 8011/504.1: EDB |
| Client ID: PBW | Batch ID: 72230 | RunNo: 93603 |
| Prep Date: 12/21/2022 | Analysis Date: 12/22/2022 | SeqNo: 3377660 Units: µg/L |
| Analyte | Result | PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual |
| 1,2-Dibromoethane | ND | 0.010 |

Qualifiers:

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PQL Practical Quantitative Limit
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: MB-72199 | SampType: MBLK | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: PBW | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375094 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.097 | 0.064 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 0.080 | | | | | | | | |
| Surr: DNOP | 0.038 | | 0.03750 | | 102 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCS-72199 | SampType: LCS | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSW | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375095 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.19 | 0.064 | 0.1875 | 0 | 102 | 31.2 | 125 | | | B |
| Surr: DNOP | 0.016 | | 0.01875 | | 86.1 | 15.9 | 177 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: LCSD-72199 | SampType: LCSD | | TestCode: EPA Method 8015D Mod: Diesel Range | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72199 | | RunNo: 93546 | | | | | | | |
| Prep Date: 12/20/2022 | Analysis Date: 12/22/2022 | | SeqNo: 3375096 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 0.21 | 0.064 | 0.1875 | 0 | 111 | 31.2 | 125 | 8.40 | 20 | B |
| Surr: DNOP | 0.018 | | 0.01875 | | 96.8 | 15.9 | 177 | 0 | 0 | |

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|---------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 2.5ug gro lcs | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: LCSW | Batch ID: R93515 | | RunNo: 93515 | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | | SeqNo: 3373424 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 0.51 | 0.050 | 0.5000 | 0 | 102 | 80 | 120 | | | |
| Surr: BFB | 37 | | 20.00 | | 186 | 70 | 130 | | | S |

| | | | | | | | | | | |
|-------------------------------|----------------------------------|-------|---|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | | | |
| Client ID: PBW | Batch ID: R93515 | | RunNo: 93515 | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | | SeqNo: 3373434 | | Units: mg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 0.050 | | | | | | | | |
| Surr: BFB | 18 | | 20.00 | | 88.8 | 70 | 130 | | | |

Qualifiers:

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J Analyte detected below quantitation limits
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: LCSW | Batch ID: R93479 | | RunNo: 93479 | | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | | SeqNo: 3371419 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Toluene | 23 | 1.0 | 20.00 | 0 | 114 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| 1,1-Dichloroethene | 22 | 1.0 | 20.00 | 0 | 112 | 70 | 130 | | | |
| Trichloroethene (TCE) | 23 | 1.0 | 20.00 | 0 | 113 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.8 | | 10.00 | | 97.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 104 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | | TestCode: EPA Method 8260B: VOLATILES | | | | | | | |
| Client ID: PBW | Batch ID: R93479 | | RunNo: 93479 | | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | | SeqNo: 3371446 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |

Qualifiers:

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S % Recovery outside of standard limits. If undiluted results may be estimated.

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E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93479 | RunNo: 93479 | | | | | | | | |
| Prep Date: | Analysis Date: 12/21/2022 | SeqNo: 3371446 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 11 | | 10.00 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 11 | | 10.00 | | 106 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: 100ng lcs | SampType: LCS | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: LCSW | Batch ID: R93506 | RunNo: 93506 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373325 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 103 | 70 | 130 | | | |

| | | | | | | | | | | |
|-----------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Sample ID: mb | SampType: MBLK | TestCode: EPA Method 8260B: VOLATILES | | | | | | | | |
| Client ID: PBW | Batch ID: R93506 | RunNo: 93506 | | | | | | | | |
| Prep Date: | Analysis Date: 12/22/2022 | SeqNo: 3373348 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | ND | 1.0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.3 | | 10.00 | | 93.4 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 104 | 70 | 130 | | | |
| Surr: Toluene-d8 | 11 | | 10.00 | | 106 | 70 | 130 | | | |

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72138 | SampType: MBLK | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72138 | | | RunNo: 93478 | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | | SeqNo: 3371393 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | ND | 10 | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | |
| Benz(a)anthracene | ND | 5.0 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | |
| Benzoic acid | ND | 20 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | 20 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 5.0 | | | | | | | | |
| Diethyl phthalate | ND | 10 | | | | | | | | |
| Dimethyl phthalate | ND | 10 | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | |
| 2,4-Dinitrophenol | ND | 20 | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | |
| 1-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 5.0 | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | |
| 3+4-Methylphenol | ND | 10 | | | | | | | | |
| Naphthalene | ND | 5.0 | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | |
| Phenol | ND | 20 | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | |
| Pyridine | ND | 40 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | |
| Surr: 2-Fluorophenol | 78 | | 200.0 | | 38.8 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 65 | | 200.0 | | 32.3 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 110 | | 200.0 | | 53.5 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 52 | | 100.0 | | 51.9 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 42.4 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 89 | | 100.0 | | 88.9 | 34.4 | 134 | | | |

| Sample ID: lcs-72138 | SampType: LCS | | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | |
|------------------------------|----------------------------------|-----|-----------|--|------|--------------------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72138 | | | RunNo: 93478 | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | | SeqNo: 3371394 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |

Qualifiers:

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D Sample Diluted Due to Matrix
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcs-72138 | SampType: LCS | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSW | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371394 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 56 | 10 | 100.0 | 0 | 55.7 | 21.3 | 104 | | | |
| 1,4-Dichlorobenzene | 37 | 5.0 | 100.0 | 0 | 37.2 | 15 | 89.8 | | | |
| Phenol | 79 | 20 | 200.0 | 0 | 39.3 | 17 | 61.1 | | | |
| Pyrene | 85 | 10 | 100.0 | 0 | 85.1 | 61 | 123 | | | |
| Surr: 2-Fluorophenol | 98 | | 200.0 | | 49.2 | 15 | 84.5 | | | |
| Surr: Phenol-d5 | 76 | | 200.0 | | 37.8 | 15 | 67 | | | |
| Surr: 2,4,6-Tribromophenol | 150 | | 200.0 | | 76.7 | 15 | 108 | | | |
| Surr: Nitrobenzene-d5 | 63 | | 100.0 | | 63.2 | 16.8 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 57 | | 100.0 | | 56.7 | 15 | 101 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 100 | 34.4 | 134 | | | |

| | | | | | | | | | | |
|------------------------------|----------------------------------|-----|--|-------------|--------------------|----------|-----------|------|----------|------|
| Sample ID: lcsd-72138 | SampType: LCSD | | TestCode: EPA Method 8270C: Semivolatiles | | | | | | | |
| Client ID: LCSS02 | Batch ID: 72138 | | RunNo: 93478 | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/21/2022 | | SeqNo: 3371395 | | Units: µg/L | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Acenaphthene | 71 | 10 | 100.0 | 0 | 71.4 | 21.3 | 104 | 24.7 | 45.3 | |
| 1,4-Dichlorobenzene | 47 | 5.0 | 100.0 | 0 | 46.7 | 15 | 89.8 | 22.6 | 39.6 | |
| Phenol | 93 | 20 | 200.0 | 0 | 46.6 | 17 | 61.1 | 16.9 | 42.5 | |
| Pyrene | 92 | 10 | 100.0 | 0 | 92.0 | 61 | 123 | 7.71 | 11.8 | |
| Surr: 2-Fluorophenol | 110 | | 200.0 | | 53.8 | 15 | 84.5 | 0 | 0 | |
| Surr: Phenol-d5 | 86 | | 200.0 | | 42.9 | 15 | 67 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 180 | | 200.0 | | 87.9 | 15 | 108 | 0 | 0 | |
| Surr: Nitrobenzene-d5 | 75 | | 100.0 | | 74.7 | 16.8 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 67 | | 100.0 | | 67.4 | 15 | 101 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 110 | | 100.0 | | 108 | 34.4 | 134 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| Sample ID: mb-72138 | SampType: MBLK | TestCode: EPA Method 8270SIM | | | | | | | | |
|------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: PBW | Batch ID: 72138 | RunNo: 93434 | | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369941 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 0.30 | | | | | | | | |
| 1-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| 2-Methylnaphthalene | ND | 0.30 | | | | | | | | |
| Acenaphthene | ND | 0.30 | | | | | | | | |
| Fluorene | ND | 0.30 | | | | | | | | |
| Phenanthrene | ND | 0.30 | | | | | | | | |
| Anthracene | ND | 0.30 | | | | | | | | |
| Fluoranthene | ND | 0.30 | | | | | | | | |
| Pyrene | ND | 1.0 | | | | | | | | |
| Benz(a)anthracene | ND | 0.30 | | | | | | | | |
| Chrysene | ND | 0.30 | | | | | | | | |
| Benzo(b)fluoranthene | ND | 0.40 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 0.30 | | | | | | | | |
| Surr: Nitrobenzene-d5 | 48 | | 100.0 | | 48.5 | 15 | 108 | | | |
| Surr: 2,4,6-Tribromophenol | 83 | | 200.0 | | 41.7 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 42 | | 100.0 | | 42.0 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 100 | | 100.0 | | 99.8 | 15 | 166 | | | |

| Sample ID: LCS-72138-LF | SampType: LCS | TestCode: EPA Method 8270SIM | | | | | | | | |
|--------------------------------|----------------------------------|--|-----------|-------------|------|----------|-----------|------|----------|------|
| Client ID: LCSW | Batch ID: 72138 | RunNo: 93434 | | | | | | | | |
| Prep Date: 12/16/2022 | Analysis Date: 12/20/2022 | SeqNo: 3369942 Units: µg/L | | | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.82 | 0.30 | 2.000 | 0 | 41.0 | 15 | 60.5 | | | |
| Naphthalene | 1.3 | 0.30 | 2.000 | 0 | 66.0 | 15 | 78.3 | | | |
| 1-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 67.0 | 15 | 79.6 | | | |
| 2-Methylnaphthalene | 1.3 | 0.30 | 2.000 | 0 | 65.0 | 15 | 78.6 | | | |
| Acenaphthene | 1.4 | 0.30 | 2.000 | 0 | 71.0 | 15 | 92 | | | |
| Fluorene | 1.5 | 0.30 | 2.000 | 0 | 76.0 | 15 | 96 | | | |
| Phenanthrene | 1.7 | 0.30 | 2.000 | 0 | 85.0 | 21 | 103 | | | |
| Anthracene | 1.8 | 0.30 | 2.000 | 0 | 90.0 | 21.1 | 106 | | | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 99.0 | 32.8 | 119 | | | |
| Pyrene | 1.7 | 1.0 | 2.000 | 0 | 87.0 | 34.1 | 110 | | | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 106 | 32 | 132 | | | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.3 | 112 | | | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 98.0 | 34.1 | 119 | | | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 123 | 24.7 | 152 | | | |
| Surr: Nitrobenzene-d5 | 62 | | 102.0 | | 61.2 | 15 | 108 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2212913

09-Jan-23

Client: Marathon

Project: 2022 GW Sampling 4th Quarter

| | | | | | | | | | | |
|--------------------------------|--------|----------------------------------|-----------|-------------------------------------|-----------------------|----------|--------------------|------|----------|------|
| Sample ID: LCS-72138-LF | | SampType: LCS | | TestCode: EPA Method 8270SIM | | | | | | |
| Client ID: LCSW | | Batch ID: 72138 | | | RunNo: 93434 | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/20/2022 | | | SeqNo: 3369942 | | Units: µg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: 2,4,6-Tribromophenol | 93 | | 104.0 | | 89.9 | 15 | 112 | | | |
| Surr: 2-Fluorobiphenyl | 54 | | 102.0 | | 52.8 | 15 | 107 | | | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 89.7 | 15 | 166 | | | |

| Sample ID: LCSD-72138-LF | | SampType: LCSD | | TestCode: EPA Method 8270SIM | | | | | | |
|---------------------------------|--------|----------------------------------|-----------|-------------------------------------|------|--------------------|-----------|------|----------|------|
| Client ID: LCSS02 | | Batch ID: 72138 | | RunNo: 93434 | | | | | | |
| Prep Date: 12/16/2022 | | Analysis Date: 12/20/2022 | | SeqNo: 3369943 | | Units: µg/L | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| 1,4-Dioxane | 0.86 | 1.0 | 2.000 | 0 | 43.0 | 15 | 60.5 | 4.76 | 29.7 | J |
| Naphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.3 | 5.88 | 31.7 | |
| 1-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 72.0 | 15 | 79.6 | 7.19 | 31.4 | |
| 2-Methylnaphthalene | 1.4 | 0.30 | 2.000 | 0 | 70.0 | 15 | 78.6 | 7.41 | 30.5 | |
| Acenaphthene | 1.6 | 0.30 | 2.000 | 0 | 78.0 | 15 | 92 | 9.40 | 30.5 | |
| Fluorene | 1.7 | 0.30 | 2.000 | 0 | 84.0 | 15 | 96 | 10.0 | 25.1 | |
| Phenanthrene | 1.8 | 0.30 | 2.000 | 0 | 92.0 | 21 | 103 | 7.91 | 26.4 | |
| Anthracene | 1.9 | 0.30 | 2.000 | 0 | 94.0 | 21.1 | 106 | 4.35 | 14.4 | |
| Fluoranthene | 2.0 | 0.30 | 2.000 | 0 | 102 | 32.8 | 119 | 2.99 | 14.8 | |
| Pyrene | 1.8 | 1.0 | 2.000 | 0 | 90.0 | 34.1 | 110 | 3.39 | 19.2 | |
| Benz(a)anthracene | 2.1 | 0.30 | 2.000 | 0 | 106 | 32 | 132 | 0 | 29.3 | |
| Chrysene | 1.9 | 0.30 | 2.000 | 0 | 95.0 | 31.3 | 112 | 0 | 19 | |
| Benzo(b)fluoranthene | 2.0 | 0.40 | 2.000 | 0 | 98.0 | 34.1 | 119 | 0 | 31.6 | |
| Indeno(1,2,3-cd)pyrene | 2.5 | 0.30 | 2.000 | 0 | 126 | 24.7 | 152 | 2.41 | 21.3 | |
| Surr: Nitrobenzene-d5 | 68 | | 102.0 | | 66.6 | 15 | 108 | 0 | 0 | |
| Surr: 2,4,6-Tribromophenol | 100 | | 104.0 | | 95.7 | 15 | 112 | 0 | 0 | |
| Surr: 2-Fluorobiphenyl | 58 | | 102.0 | | 56.5 | 15 | 107 | 0 | 0 | |
| Surr: 4-Terphenyl-d14 | 91 | | 102.0 | | 88.8 | 15 | 166 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit



Hall Environmental Analysis Laboratory
 1907 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.halleirvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2212913**

ReptNo: **1**

Received By: **Sean Livingston**

12/15/2022 7:55:00 AM

SL

Completed By: **Sean Livingston**

12/15/2022 8:44:25 AM

SL

Reviewed By: *JS 12/15/22*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 8.0°C ? Yes ☐ No ☒ NA ☐
Samples not frozen.
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met? Yes ☒ No ☐
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: 14 2
 (<2 or >12 unless noted)
 Adjusted? NO
 Checked by: SL 12/15/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

| | | | |
|----------------------|--|-------|---|
| Person Notified: | | Date: | |
| By Whom: | | Via: | ☐ eMail ☐ Phone ☐ Fax ☐ In Person |
| Regarding: | | | |
| Client Instructions: | | | |

16. Additional remarks: No bottles for Field Blank received. TO 12/15/22

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | -3.5 | Good | | | | |
| 2 | 0.7 | Good | | | | |
| 3 | -2.4 | Good | | | | |
| 4 | -1.6 | Good | | | | |

Client: Marathon Gallup Refinery
Project Name: 2022 GW Sampling 4th Quarter
Project #: 697-080-001
Mailing Address: 92 Giant Crossing Road
Jamestown, NM 87301
Phone #: 808-640-1823
email or Fax#: 808-640-1823
QA/QC Package: ☐ Level 4 (Full Validation)
X Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ AZ Compliance
☐ NELAC
X EDD (Type)

Project Manager: Lesli Alexander

Sampler: On Ice: ☒ Yes ☐ No
of Coolers: 4
Cooler Temp (including CP): See Remarks
Container Type and # Preservative Type HEAL No.
13 13 001
13 13 002
13 13 003
13 13 004
13 13 005
13 13 006
3 13 007
13 13 008

| Date | Time | Matrix | Sample Name | See Analyte | 8260B VOC | 8270C: SVOC | 8270C:SIM PAH, 14 Dioxane | 8015: TPH GRO/DROMRO | E200.7: Metals | E200.7: Dissolved Metals | E245.1 Mercury | E504.1 EDB | E335.4: Cyanide Subbed | 637.1: PFAS | SM 5201B: BOD | 410.4: COD |
|---------|-------|--------|--------------|-------------|-----------|-------------|---------------------------|----------------------|----------------|--------------------------|----------------|------------|------------------------|-------------|---------------|------------|
| 12/1/14 | 9:30 | | EB-12-14-22 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 9:30 | | DW-58 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 10:25 | | DW-70 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 10:45 | | NAPT-2 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 11:15 | | NAPT-3 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 11:30 | | KA-2 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | 11:30 | | FB-12-14-22 | | X | X | X | X | X | X | X | X | X | | | |
| 12/1/14 | — | | DUP-12-14-22 | | X | X | X | X | X | X | X | X | X | | | |

Date: 12/1/14 Time: 12:30
Relinquished by: Milano Tuyo
Received by: SGA Date: 12/15/14 Time: 7:55
Via: Courier
Relinquished by: Date: Time:
Received by: Date: Time:
Via: Date: Time:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 23, 2023

Lesli Alexander
Marathon
92 Giant Crossing Rd
Gallup, NM 87301
TEL: (505) 722-3833
FAX:

RE: 2022 GW Sampling 4th Quarter

OrderNo.: 2301520

Dear Lesli Alexander:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/13/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2301520

Date Reported: 1/23/2023

CLIENT: Marathon Client Sample ID: STP-1 to EP-2
Project: 2022 GW Sampling 4th Quarter Collection Date: 1/12/2023 11:00:00 AM
Lab ID: 2301520-001 Matrix: AQUEOUS Received Date: 1/13/2023 7:40:00 AM

| Analyses | Result | RL | Qual | Units | DF | Date Analyzed | Batch |
|---------------------------------------|--------|-------|------|---------|----|----------------------|--------------|
| SM 9223B FECAL INDICATOR: E. COLI MPN | | | | | | | Analyst: dms |
| E. Coli | >24196 | 10.00 | H | MPN/100 | 10 | 1/16/2023 4:50:00 PM | 72623 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

| | | | | |
|-------------|-----|---|----|---|
| Qualifiers: | * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| | D | Sample Diluted Due to Matrix | E | Above Quantitation Range/Estimated Value |
| | H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| | ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| | PQL | Practical Quantitative Limit | RL | Reporting Limit |
| | S | % Recovery outside of standard limits. If undiluted results may be estimated. | | |
| | | | | |



Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975 FAX: 505-345-4107
 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Marathon**

Work Order Number: **2301520**

ReptNo: **1**

Received By: **Juan Rojas** 1/13/2023 7:40:00 AM

Completed By: **Sean Livingston** 1/13/2023 7:56:02 AM

Reviewed By: *CME* 1/13/23 @ 0806

H. Livingston

Sean Livingston

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☒ Not Present ☐

2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *juan/1/13/23*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.9 | Good | Not Present | YOGI | | |

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

THE UNIVERSITY OF CHICAGO

[illegible]

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly indicated on the analytical report.



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix D – 2022 Data Validation Reports

Appendix D-1. 1st Quarter Data Validation Reports

Appendix D-2. 2nd Quarter Data Validation Reports

Appendix D-3. 3rd Quarter Data Validation Reports

Appendix D-4. 4th Quarter Data Validation Reports



Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix D-1. 1st Quarter Data Validation Reports



Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/18/2022 |
| Date Validated: 07/05/2022 | Sample End Date: 03/18/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Chemical Oxygen Demand by EPA Method 410.4 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Biochemical Oxygen Demand (BOD) by SM Method 5210B ▪ E.Coli by SM Method 9223B | |
| Laboratory Project ID: 2203A72 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB 3-18-22 | 2203A72-001 |
| East LDU | 2203A72-002 |
| West LDU | 2203A72-003 |
| STP-1 to EP-2 | 2203A72-004 |
| FB 3-18-22 | 2203A72-005 |
| DUP 3-18-22 | 2203A72-006 |
| Trip Blank | 2203A72-007 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ✓ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J- | The result is an estimated concentration, but may be biased low |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 363 data points. The data completeness calculation does not include any submitted blank sample results. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270: "S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

E – Estimated value. *This laboratory flag was applied only to QC sample results in the laboratory report, and qualification of sample data was not required.*

H – Holding times for preparation or analysis exceeded.

J – Analyte detected below quantitation limits

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|--------------------------------------|------------------------------|------------------------|
| 245.1 | East LDU | Total Mercury | 5 |
| 200.8 | East LDU, West LDU, DUP 3-18-22 | Total and Dissolved Metals | 5 |
| 200.7 | East LDU | Total and Dissolved Chromium | 10 |
| 200.7 | East LDU | Total and Dissolved Nickel | 10 |
| 9223B | STP-1 to EP-2 | E.Coli | 10 |
| 8015 | East LDU | GRO, DRO MRO | 10 |
| 8260B | East LDU | VOCs | 10 |
| 8270C | East LDU, STP-1 to EP-2, DUP 3-18-22 | SVOCs | 10 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



| VALIDATION CRITERIA CHECKLIST | | | | | | | | | | | | | | | | | |
|--|---------------|--------|---------------|-------|---------------|-------|---------------|-------|--------------|-------|---------------|--------|-----------|-------|-----|--------|------------|
| 6. Were samples received in good condition within method-specified requirements? | Yes | | | | | | | | | | | | | | | | |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of 4°C ± 2°C at 2.1°C, 2.3°C, and 2.4°C as noted on the CoC and the <i>Sample Log-in Check List</i>.</p> <p>Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.3°C as noted on the CoC.</p> | | | | | | | | | | | | | | | | | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes | | | | | | | | | | | | | | | | |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | | | | | | | | | | | | | | | | | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes | | | | | | | | | | | | | | | | |
| <p>Comments: The results were reported in concentration units of micrograms per liter (µg/L), milligrams per liter (mg/L), and most probable number per 100 mL (MPN/100mL), which were acceptable for the sample matrix and the analyses requested.</p> | | | | | | | | | | | | | | | | | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No | | | | | | | | | | | | | | | | |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | | | | | | | | | | | | | | | | | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A | | | | | | | | | | | | | | | | |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | | | | | | | | | | | | | | | | | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | | | | | | | | | | | | | | | | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No | | | | | | | | | | | | | | | | |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.</p> <table border="1"> <thead> <tr> <th>Method</th> <th>Analyte</th> <th>Batch</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>245.1</td> <td>Total Mercury</td> <td>66396</td> <td>0.00014 mg/L</td> </tr> <tr> <td>8260B</td> <td>Chloromethane</td> <td>R86666</td> <td>0.66 µg/L</td> </tr> <tr> <td>8015D</td> <td>GRO</td> <td>G86666</td> <td>0.040 mg/L</td> </tr> </tbody> </table> <p>Detections of chloromethane and GRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of GRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.</p> | | Method | Analyte | Batch | Concentration | 245.1 | Total Mercury | 66396 | 0.00014 mg/L | 8260B | Chloromethane | R86666 | 0.66 µg/L | 8015D | GRO | G86666 | 0.040 mg/L |
| Method | Analyte | Batch | Concentration | | | | | | | | | | | | | | |
| 245.1 | Total Mercury | 66396 | 0.00014 mg/L | | | | | | | | | | | | | | |
| 8260B | Chloromethane | R86666 | 0.66 µg/L | | | | | | | | | | | | | | |
| 8015D | GRO | G86666 | 0.040 mg/L | | | | | | | | | | | | | | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 66643 | Not Prepared |
| 200.7 | Dissolved Metals | A86607 | EB 3-18-22 |
| 200.7 | Dissolved Metals | A87332 | Not Prepared |
| 200.8 | Total Metals | 66341 | Not Prepared |
| 200.8 | Dissolved Metals | A86633 | Not Prepared |
| 200.8 | Dissolved Metals | B86624 | STP-1 to EP-2 |
| 245.1 | Dissolved and Total Mercury | 66396 | Not Prepared |
| 410.4 | COD | WG1836817 | Not Associated |
| 504.1 | EDB | 66262 | Not Prepared |
| 4500CN E | Cyanide | WG1836405 | Not Associated |
| 4500CN E | Cyanide | WG1836836 | Not Associated |
| 5210B | BOD | 66272 | Not Prepared |
| 8015D | TPH DRO and MRO | 66372 | Not Prepared |
| 8015D | TPH GRO | G86666 | West LDU |
| 8260B | VOCs | R86666 | East LDU |
| 8270C | SVOCs | 66282 | Not Prepared |
| 8270C | SVOCs | 66355 | Not Prepared |
| 8270C SIM | SVOCs | R86694 | Not Prepared |
| 8270C SIM | SVOCs | R86800 | Not Prepared |
| 9223B | E.Coli | 66276 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? Yes

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|-------------|--------------------|------------|
| 8270C | 2-Fluorophenol | East LDU | 10.1% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | East LDU | 25.0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | East LDU | 15.7% | 18.6-129% |
| 8015D | DNOP | DUP 3-18-22 | 159% | 42.2-138% |

The associated target analytes in the sample East LDU with surrogate recoveries that were less than lower laboratory QC limits were qualified as UJ if not detected and J- if detected due to evidence of potential low bias. The associated target analytes in the sample DUP 3-18-22 with a surrogate recovery that was greater than the upper laboratory QC limit were detections and were qualified as J+ due to evidence of potential high bias.

Since Method 8270 surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples West LDU and DUP 3-18-22, and qualification of sample data was not required.

The DRO and MRO results for sample East LDU were not qualified based on the surrogate non-conformance in the Method 8015D analysis since the applied dilution of 10 times resulted in a surrogate concentration below routinely calibrated levels, and that result was deemed unreliable and possibly inaccurate.

The SVOC results for sample STP-1 to EP-2 were not qualified based on the surrogate non-conformances in the Method 8070C analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate. Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-18-22, and one equipment blank sample, EB 3-18-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.67 µg/L |
| Trip Blank | 8015 | GRO | 0.035 mg/L |
| FB 3-18-22 | 8015 | GRO | 0.032 mg/L |
| EB 3-18-22 | 200.7 | Dissolved Zinc | 0.0068 mg/L |
| EB 3-18-22 | 8260B | Chloromethane | 0.67 µg/L |
| EB 3-18-22 | 8015D | GRO | 0.034 mg/L |
| EB 3-18-22 | 8015D | DRO | 0.023 mg/L |

The detection of dissolved zinc in the associated sample West LDU that was less than the applicable reporting limit was assigned a U qualifier. Detections of dissolved zinc in the associated samples that were greater than or equal to the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of dissolved zinc in the associated samples and detections of DRO that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane and GRO results were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP 3-18-22 was collected as a field duplicate of sample West LDU.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value could not be calculated for 1,4-dioxane for the field duplicate pair West LDU and DUP 3-18-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, 1,4-dioxane was qualified as J and UJ for the parent and duplicate samples, respectively.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 410.4 | COD | WG1836817 | Not Associated |
| 4500CN E | Cyanide | WG1836405 | Not Associated |
| 4500CN E | Cyanide | WG1836836 | DUP 3-18-22, Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| East LDU | Mercury | ND | 0.00010 |
| DUP 3-18-22 | Barium | 0.068 | 0.069 |
| DUP 3-18-22 | Beryllium | ND | 0.00090 |
| East LDU | Cadmium | 0.013 | 0.031 |
| West LDU | Cadmium | 0.0047 | 0.012 |
| DUP 3-18-22 | Cadmium | 0.0055 | 0.013 |
| East LDU | Chromium | 7.0 | 7.7 |
| East LDU | Cobalt | 0.10 | 0.12 |
| West LDU | Cobalt | 0.0061 | 0.013 |
| DUP 3-18-22 | Cobalt | 0.0069 | 0.014 |
| East LDU | Lead | ND | 0.0014 |
| East LDU | Nickel | 7.3 | 8.1 |
| West LDU | Nickel | 0.81 | 0.89 |
| DUP 3-18-22 | Nickel | 0.83 | 0.88 |
| STP-1 to EP-2 | Silver | ND | 0.0014 |
| East LDU | Vanadium | 0.14 | 0.16 |
| West LDU | Vanadium | 0.066 | 0.071 |
| DUP 3-18-22 | Vanadium | 0.067 | 0.069 |
| EB 3-18-22 | Zinc | ND | 0.0068 |
| West LDU | Zinc | ND | 0.0080 |
| DUP 3-18-22 | Zinc | ND | 0.012 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: West LDU
Field Duplicate Sample ID: DUP 3-18-22 | | | | |
|---|----------------|-------------------|---------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.068 mg/L | 0.069 mg/L | 1.5% |
| Barium, Total | E 200.7 | 0.066 mg/L | 0.068 mg/L | 3.0% |
| Beryllium, Dissolved | E 200.7 | ND (0.0020 mg/L) | 0.00090 mg/L | DL |
| Cadmium, Dissolved | E 200.7 | 0.012 mg/L | 0.013 mg/L | 8.0% |
| Cadmium, Total | E 200.7 | 0.0047 mg/L | 0.0055 mg/L | 15.7% |
| Chromium, Dissolved | E 200.7 | 0.14 mg/L | 0.14 mg/L | 0.0% |
| Chromium, Total | E 200.7 | 0.32 mg/L | 0.32 mg/L | 0.0% |
| Cobalt, Dissolved | E 200.7 | 0.013 mg/L | 0.014 mg/L | 7.4% |
| Cobalt, Total | E 200.7 | 0.0061 mg/L | 0.0069 mg/L | 12.3% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.89 mg/L | 0.88 mg/L | 1.1% |
| Nickel, Total | E 200.7 | 0.81 mg/L | 0.83 mg/L | 2.4% |
| Vanadium, Dissolved | E 200.7 | 0.071 mg/L | 0.069 mg/L | 2.9% +/-RL |
| Vanadium, Total | E 200.7 | 0.066 mg/L | 0.067 mg/L | 1.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0080 mg/L | 0.012 mg/L | 40.0% +/-RL |
| Arsenic, Total | E200.8 | 0.00068 mg/L | 0.00064 mg/L | 6.1% +/-RL |
| TPH DRO | SW8015 | 2.0 mg/L | 2.4 mg/L | 18.2% |
| TPH GRO | SW8015 | 0.28 mg/L | 0.27 mg/L | 3.6% |
| TPH ORO | SW8015 | ND (0.080 mg/L) | 0.12 mg/L | DL |
| 1,1-Dichloroethene | SW8260B | 0.53 µg/L | ND (1.0 µg/L) | DL |
| 1,2,4-Trimethylbenzene | SW8260B | 0.51 µg/L | 0.46 µg/L | 10.3% +/-RL |
| 1,3,5-Trimethylbenzene | SW8260B | 4.8 µg/L | 4.7 µg/L | 2.1% |
| Benzene | SW8260B | 13 µg/L | 12 µg/L | 8.0% |
| Chloromethane | SW8260B | 0.83 µg/L | 0.85 µg/L | 2.4% +/-RL |
| Ethylbenzene | SW8260B | 6.0 µg/L | 5.8 µg/L | 3.4% |
| Isopropylbenzene | SW8260B | 0.94 µg/L | 0.90 µg/L | 4.3% +/-RL |
| MTBE | SW8260B | 4.9 µg/L | 4.8 µg/L | 2.1% |
| n-Propylbenzene | SW8260B | 0.65 µg/L | 0.59 µg/L | 9.7% +/-RL |
| p-Isopropyltoluene | SW8260B | 0.36 µg/L | 0.36 µg/L | 0.0% +/-RL |
| sec-Butylbenzene | SW8260B | 0.25 µg/L | 0.22 µg/L | 12.8% +/-RL |
| Toluene | SW8260B | 0.82 µg/L | 0.70 µg/L | 15.8% +/-RL |
| Trichloroethene | SW8260B | 0.58 µg/L | ND (1.0 µg/L) | DL |
| Xylenes, Total | SW8260B | 0.52 µg/L | 0.51 µg/L | 1.9% +/-RL |
| 1,4-Dioxane | SW8270C | 8.0 µg/L | ND (10 µg/L) | DL |
| Naphthalene | SW8270C | 0.16 µg/L | ND (1.0 µg/L) | DL |
| Pyrene | SW8270C | 0.16 µg/L | ND (2.0 µg/L) | DL |
| Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020. | | | | |



DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value could not be calculated for 1,4-dioxane for the field duplicate pair West LDU and DUP 3-18-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, 1,4-dioxane was qualified as J and UJ for the parent and duplicate samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| HT-AN | Sample was analyzed outside of the method holding time. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,1-Dichloroethene | SW8260B | West LDU | 2203a72-003a | 0.53 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | West LDU | 2203a72-003a | 0.51 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.46 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | West LDU | 2203a72-003c | 8.0 | 1.0 | µg/L | J | ERPD-FD |
| 1,4-Dioxane | SW8270C | DUP 3-18-22 | 2203a72-006c | ND | 10 | µg/L | UJ | ERPD-FD |
| 2,4,6-Trichlorophenol | SW8270C | East LDU | 2203a72-002c | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | East LDU | 2203a72-002c | 5.7 | 5.0 | µg/L | J- | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | East LDU | 2203a72-002c | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2-Butanone | SW8260B | East LDU | 2203a72-002a | 27 | 100 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | East LDU | 2203a72-002c | 7.7 | 5.0 | µg/L | J- | LR-SUR |
| 3,4-Methylphenol | SW8270C | East LDU | 2203a72-002c | 7.1 | 5.0 | µg/L | J- | LR-SUR |
| Acetone | SW8260B | STP-1 to EP-2 | 2203a72-004a | 3.4 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | East LDU | 2203A72-002E | 0.00087 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | East LDU | 2203A72-002D | 0.0012 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | West LDU | 2203A72-003D | 0.00068 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Arsenic, Total | E200.8 | DUP 3-18-22 | 2203A72-006D | 0.00064 | 0.0050 | mg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | DUP 3-18-22 | 2203A72-006E | 0.0009 | 0.0020 | mg/L | J | MDLRL |
| Chloromethane | SW8260B | EB 3-18-22 | 2203a72-001a | 0.67 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | East LDU | 2203a72-002a | 7.0 | 30 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | West LDU | 2203a72-003a | 0.83 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | STP-1 to EP-2 | 2203a72-004a | 0.69 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.85 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203a72-007a | 0.67 | 3.0 | µg/L | U | MBD, MDLRL |
| Cobalt, Dissolved | E 200.7 | STP-1 to EP-2 | 2203A72-004E | 0.0028 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | STP-1 to EP-2 | 2203A72-004D | 0.0042 | 0.0060 | mg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | East LDU | 2203a72-002a | 8.1 | 10 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | West LDU | 2203a72-003a | 0.94 | 1.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.90 | 1.0 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | East LDU | 2203A72-002E | 0.0014 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | STP-1 to EP-2 | 2203A72-004D | 0.00017 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | East LDU | 2203A72-002E | 0.00010 | 0.00020 | mg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | East LDU | 2203a72-002a | 3.0 | 30 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | West LDU | 2203a72-003a | 0.65 | 1.0 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.59 | 1.0 | µg/L | J | MDLRL |
| Phenol | SW8270C | East LDU | 2203a72-002c | 5.9 | 5.0 | µg/L | J- | LR-SUR |
| p-Isopropyltoluene | SW8260B | East LDU | 2203a72-002a | 3.2 | 10 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | West LDU | 2203a72-003a | 0.36 | 1.0 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.36 | 1.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | West LDU | 2203a72-003c | 0.16 | 0.20 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | East LDU | 2203a72-002a | 3.1 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | West LDU | 2203a72-003a | 0.25 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.22 | 1.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Selenium, Dissolved | E200.8 | STP-1 to EP-2 | 2203A72-004E | 0.00084 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | STP-1 to EP-2 | 2203A72-004E | 0.0014 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | West LDU | 2203a72-003a | 0.82 | 1.0 | µg/L | J | MDLRL |
| Toluene | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.70 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | EB 3-18-22 | 2203A72-001C | 0.023 | 0.064 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | DUP 3-18-22 | 2203a72-006C | 2.40 | 0.64 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | DUP 3-18-22 | 2203a72-006C | 0.12 | 0.08 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | West LDU | 2203a72-003a | 0.28 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | DUP 3-18-22 | 2203a72-006a | 0.27 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | EB 3-18-22 | 2203a72-001a | 0.034 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | STP-1 to EP-2 | 2203a72-004a | 0.044 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | FB 3-18-22 | 2203a72-005a | 0.032 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | Trip Blank | 2203a72-007a | 0.035 | 0.050 | mg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | West LDU | 2203a72-003a | 0.58 | 1.0 | ug/L | J | MDLRL |
| Xylenes, Total | SW8260B | West LDU | 2203a72-003a | 0.52 | 1.5 | ug/L | J | MDLRL |
| Xylenes, Total | SW8260B | DUP 3-18-22 | 2203a72-006a | 0.51 | 1.5 | ug/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | STP-1 to EP-2 | 2203A72-004E | 0.029 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP 3-18-22 | 2203A72-006E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | West LDU | 2203A72-003E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-18-22 | 2203A72-001E | 0.0068 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/22/2022 |
| Date Validated: 07/13/2022 | Sample End Date: 03/22/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203B95 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB 3-22-22 | 2203B95-001 |
| OW-70 | 2203B95-002 |
| OW-12A | 2203B95-003 |
| KA-3 | 2203B95-004 |
| NAPIS-3 | 2203B95-005 |
| NAPIS-2 | 2203B95-006 |
| OAPIS-1 | 2203B95-007 |
| DUP-3-22-22 | 2203B95-008 |
| FB-3-22-22 | 2203B95-009 |
| Trip Blank | 2203B95-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C SIM: The chrysene-d₁₂ internal standard area count for only the equipment blank was slightly out of range. Insufficient sample extract remained for reanalysis. This sample is non-detect for all PAH compounds.

Method 8270C: "S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

1-methylphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample NAPIS-2.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

E – Estimated value. *This laboratory flag was applied only to QC sample and surrogate results in the laboratory report, and qualification of sample data was not required.*

J – Analyte detected below quantitation limits

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|--------------------------|----------------------------|------------------------|
| 200.7 | OW-12A, NAPIS-3, NAPIS-2 | Total and Dissolved Barium | 5 |
| 200.8 | OAPIS-1 | Dissolved Metals | 5 |
| 200.8 | OW-12A, KA-3, OAPIS-1 | Total Metals | 5 |
| 8015D | OAPIS-1 | GRO, DRO MRO | 5 |
| 8260B | OAPIS-1 | VOCs | 5 |
| 200.7 | NAPIS-2 | Total Barium | 10 |
| 8015D | NAPIS-2 | GRO | 10 |
| 8260B | OW-12A | Select VOCs | 10 |
| 8260B | NAPIS-2 | VOCs | 10 |



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.1°C and 0.9°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.9°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|---------------|--------|---------------|
| 245.1 | Total Mercury | 66396 | 0.00014 mg/L |
| 8015D | DRO | 66385 | 0.044 mg/L |
| 8260B | Chloromethane | R86734 | 0.66 µg/L |
| 8015D | GRO | G86734 | 0.041 mg/L |

Detections of chloromethane and GRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of GRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-------------------|-----------|------------------------|
| 200.7 | Total Metals | 66643 | Not Prepared |
| 200.7 | Total Metals | 66644 | Not Prepared |
| 200.7 | Dissolved Metals | B86739 | Not Prepared |
| 200.8 | Total Metals | 66440 | EB 3-22-22 |
| 200.8 | Dissolved Metals | B86714 | EB 3-22-22, OW-70 |
| 245.1 | Total Mercury | 66396 | DUP-3-22-22 |
| 245.1 | Dissolved Mercury | 66455 | Not Prepared |
| 504.1 | EDB | 66393 | Not Prepared |
| 4500CN E | Cyanide | WG1838531 | Not Associated, OW-12A |
| 4500CN E | Cyanide | WG1839312 | Not Associated |
| 8015D | TPH DRO and MRO | 66372 | Not Prepared |
| 8015D | TPH DRO and MRO | 66385 | Not Prepared |
| 8015D | TPH GRO | G86734 | OW-12A |
| 8260B | VOCs | R86734 | OW-70 |
| 8260B | VOCs | R86760 | Not Prepared |
| 8270C | SVOCs | 66355 | Not Prepared |
| 8270C SIM | SVOCs | R86800 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exception.

The MSD recovery for GRO in Method 8015D batch G86734 was outside the QC limits of 70-130% at 64.3%. GRO was detected in the associated samples, and these results were qualified as J- due to possible low bias.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | <u>LCS Recovery</u> | <u>LCSD Recovery</u> | <u>LCS/LCSD QC Limits</u> | <u>LCS/LCSD RPD</u> | <u>RPD QC Limits</u> |
|--------------|---------------------|--------------|---------------------|----------------------|---------------------------|---------------------|----------------------|
| 200.7 | Dissolved Cadmium | B86739 | 132% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Nickel | 66643 | 69.0% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Nickel | 66644 | 67.0% | ----- | 70-130% | ----- | ----- |
| 8015D | DRO | 66385 | 107% | Acceptable | 31.7%-75.4% | 56.8% | 20% |

The associated sample results were non-detections for dissolved cadmium and did not require qualification due to potential high bias.

The DRO results were detections in the associated samples, and these results were qualified as J+ due to potential high bias. These associated DRO results were also qualified as J due to evidence of poor precision.

Associated samples with detections for total nickel were qualified with J- flags to indicate estimated concentrations, and the associated sample EB 3-22-22 with a non-detection for total nickel was qualified with a UJ flag due to possible low bias.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270 surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample OW-12A, and qualification of sample data was not required.

The 8270C SIM internal standard chrysene-d₁₂ was outside the acceptance range in sample EB 3-22-22. The associated analytes (benzo(a)anthracene, chrysene, and pyrene) were not detected in sample EB 3-22-22, and the results were assigned UJ qualifiers.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-3-22-22, and one equipment blank sample, EB 3-22-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.70 µg/L |
| FB-3-22-22 | 8260B | 1,2-Dichloroethane | 0.42 µg/L |
| FB-3-22-22 | 8260B | 2-Butanone | 4.6 µg/L |
| FB-3-22-22 | 8260B | Chloromethane | 0.76 µg/L |
| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
| EB 3-22-22 | 200.7 | Dissolved Zinc | 0.0065 mg/L |
| EB 3-22-22 | 200.8 | Total Lead | 0.00027 mg/L |
| EB 3-22-22 | 8015D | DRO | 0.026 mg/L |
| EB 3-22-22 | 8015D | GRO | 0.034 mg/L |
| EB 3-22-22 | 8260B | 2-Butanone | 6.1 µg/L |
| EB 3-22-22 | 8260B | Chloromethane | 0.88 µg/L |

Detections of 1,2-dichloroethane, 2-butanone, and dissolved zinc in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc and total lead in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane and GRO results were previously qualified due to laboratory blank contamination in batches R86734 and G86734; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-22-22 was collected as a field duplicate of sample OW-70.

VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

RPD values could not be calculated for acenaphthene and anthracene for the field duplicate pair OW-70 and DUP-3-22-22 since the analytes were detected in the duplicate sample and were undetected in the parent sample. As the detections in the duplicate sample were greater than two times the reporting limits, acenaphthene and anthracene were qualified as J and UJ for the duplicate and parent samples, respectively.

The RPD value for naphthalene exceeded the data validation limit of 30% at 36.4%, which was evidence of poor precision. The naphthalene results were qualified as J for samples OW-70 and DUP-3-22-22.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1838531 | Not Associated, EB 3-22-22 |
| 4500CN E | Cyanide | WG1839312 | Not Associated, DUP-3-22-22 |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for the laboratory duplicates prepared from project samples were not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| OW-70 | Antimony | ND | 0.00049 |
| OW-12A | Antimony | ND | 0.00070 |
| KA-3 | Arsenic | 0.00077 | 0.00087 |
| OAPIS-1 | Cobalt | 0.010 | 0.011 |
| OAPIS-1 | Lead | 0.0055 | 0.0059 |
| OW-70 | Nickel | 0.047 | 0.048 |
| KA-3 | Nickel | 0.022 | 0.027 |
| NAPIS-3 | Nickel | 0.025 | 0.028 |
| NAPIS-2 | Nickel | 0.053 | 0.056 |
| DUP-3-22-22 | Nickel | 0.046 | 0.048 |
| EB 3-22-22 | Zinc | ND | 0.0065 |
| KA-3 | Zinc | 0.0075 | 0.012 |
| OAPIS-1 | Zinc | 0.019 | 0.025 |

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-70
Field Duplicate Sample ID: DUP-3-22-22 | | | | |
|---|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.54 mg/L | 0.55 mg/L | 1.8% |
| Barium, Total | E 200.7 | 0.92 mg/L | 0.83 mg/L | 10.3% |
| Chromium, Total | E 200.7 | 0.010 mg/L | 0.0081 mg/L | 21.0% +/-RL |
| Cobalt, Dissolved | E 200.7 | 0.0070 mg/L | 0.0078 mg/L | 10.8% +/-RL |
| Cobalt, Total | E 200.7 | 0.011 mg/L | 0.010 mg/L | 9.5% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.048 mg/L | 0.048 mg/L | 0.0% |
| Nickel, Total | E 200.7 | 0.047 mg/L | 0.046 mg/L | 2.2% |
| Vanadium, Dissolved | E 200.7 | 0.0035 mg/L | 0.0037 mg/L | 5.6% +/-RL |
| Vanadium, Total | E 200.7 | 0.018 mg/L | 0.015 mg/L | 18.2% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0086 mg/L | 0.010 mg/L | 15.1% +/-RL |
| Zinc, Total | E 200.7 | 0.014 mg/L | 0.012 mg/L | 15.4% +/-RL |
| Antimony, Dissolved | E200.8 | 0.00049 mg/L | ND (0.0010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0015 mg/L | 0.0013 mg/L | 14.3% +/-RL |
| Arsenic, Total | E200.8 | 0.0038 mg/L | 0.0034 mg/L | 11.1% |
| Lead, Dissolved | E200.8 | 0.00019 mg/L | 0.00014 mg/L | 30.3% +/-RL |
| Lead, Total | E200.8 | 0.0038 mg/L | 0.0029 mg/L | 26.9% |
| Selenium, Total | E200.8 | 0.00072 mg/L | 0.00070 mg/L | 2.8% +/-RL |
| TPH DRO | SW8015 | 1.1 mg/L | 1.1 mg/L | 0.0% |
| TPH GRO | SW8015 | 0.67 mg/L | 0.69 mg/L | 2.9% |
| TPH ORO | SW8015 | 0.067 mg/L | 0.058 mg/L | 14.4% +/-RL |
| 1,1-Dichloroethane | SW8260B | 0.77 µg/L | 0.80 µg/L | 3.8% +/-RL |
| 1,2,4-Trimethylbenzene | SW8260B | 0.36 µg/L | 0.40 µg/L | 10.5% +/-RL |
| 1,2-Dichloroethane | SW8260B | 16 µg/L | 17 µg/L | 6.1% |
| Benzene | SW8260B | 4.8 µg/L | 5.0 µg/L | 4.1% |
| Isopropylbenzene | SW8260B | 20 µg/L | 20 µg/L | 0.0% |
| MTBE | SW8260B | 50 µg/L | 51 µg/L | 2.0% |
| n-Butylbenzene | SW8260B | 0.97 µg/L | 0.96 µg/L | 1.0% +/-RL |
| n-Propylbenzene | SW8260B | 0.97 µg/L | 0.92 µg/L | 5.3% +/-RL |
| sec-Butylbenzene | SW8260B | 4.3 µg/L | 4.2 µg/L | 2.4% |
| Toluene | SW8260B | ND (1.0 µg/L) | 0.21 µg/L | DL |
| Xylenes, Total | SW8260B | 1.6 µg/L | 1.8 µg/L | 11.8% +/-RL |
| Acenaphthene | SW8270C | ND (0.10 µg/L) | 0.22 µg/L | DL |
| Anthracene | SW8270C | ND (0.10 µg/L) | 0.26 µg/L | DL |
| Naphthalene | SW8270C | 0.18 µg/L | 0.26 µg/L | 36.4% |
| Phenanthrene | SW8270C | 0.80 µg/L | 1.0 µg/L | 22.2% |
| Pyrene | SW8270C | ND (0.20 µg/L) | 0.26 µg/L | DL |
| Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020. | | | | |



DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

RPD values could not be calculated for acenaphthene and anthracene for the field duplicate pair OW-70 and DUP-3-22-22 since the analytes were detected in the duplicate sample and were undetected in the parent sample. As the detections in the duplicate sample were greater than two times the reporting limits, acenaphthene and anthracene were qualified as J and UJ for the duplicate and parent samples, respectively.

The RPD value for naphthalene exceeded the data validation limit of 30% at 36.4%, which was evidence of poor precision. The naphthalene results were qualified as J for samples OW-70 and DUP-3-22-22.

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LIS | The internal standard area count is less than 50% of the area of the 12-hour standard. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | OW-70 | 2203b95-002a | 0.77 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OAPIS-1 | 2203b95-007a | 2.8 | 5.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-3-22-22 | 2203b95-008a | 0.80 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | OW-12A | 2203b95-003a | 0.62 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-70 | 2203b95-002a | 0.36 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | KA-3 | 2203b95-004a | 0.61 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | NAPIS-3 | 2203b95-005a | 0.22 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | NAPIS-2 | 2203b95-006a | 2.0 | 10 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP-3-22-22 | 2203b95-008a | 0.40 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-12A | 2203b95-003a | 0.47 | 1.0 | µg/L | U | FBD, MDLRL |
| 1,2-Dichloroethane | SW8260B | KA-3 | 2203b95-004a | 0.42 | 1.0 | µg/L | U | FBD, MDLRL |
| 1,2-Dichloroethane | SW8260B | NAPIS-3 | 2203b95-005a | 0.42 | 1.0 | µg/L | U | FBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,2-Dichloroethane | SW8260B | FB-3-22-22 | 2203b95-009a | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | KA-3 | 2203b95-004a | 0.48 | 1.0 | µg/L | J | MDLRL |
| 2,4-Dimethylphenol | SW8270C | NAPIS-2 | 2203B95-006C | 4.1 | 5.0 | µg/L | J | MDLRL |
| 2-Butanone | SW8260B | EB 3-22-22 | 2203b95-001a | 6.1 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | OW-12A | 2203b95-003a | 2.4 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | FB-3-22-22 | 2203b95-009a | 4.6 | 10 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | DUP-3-22-22 | 2203b95-008c | 0.22 | 0.10 | µg/L | J | ERPD-FD |
| Acenaphthene | SW8270C | OW-70 | 2203b95-002c | ND | 0.10 | µg/L | UJ | ERPD-FD |
| Anthracene | SW8270C | DUP-3-22-22 | 2203b95-008c | 0.26 | 0.10 | µg/L | J | ERPD-FD |
| Anthracene | SW8270C | OW-70 | 2203b95-002c | ND | 0.10 | µg/L | UJ | ERPD-FD |
| Antimony, Dissolved | E200.8 | OW-70 | 2203B95-002E | 0.00049 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | OW-12A | 2203B95-003E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | KA-3 | 2203B95-004E | 0.00087 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OAPIS-1 | 2203B95-007E | 0.0050 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | KA-3 | 2203B95-004D | 0.00077 | 0.0050 | mg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | EB 3-22-22 | 2203b95-001c | ND | 0.10 | µg/L | UJ | LIS |
| Chloromethane | SW8260B | EB 3-22-22 | 2203b95-001a | 0.88 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-12A | 2203b95-003a | 2.7 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | KA-3 | 2203b95-004a | 0.70 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | NAPIS-3 | 2203b95-005a | 0.72 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | NAPIS-2 | 2203b95-006a | 6.7 | 30 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB-3-22-22 | 2203b95-009a | 0.76 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203b95-010a | 0.70 | 3.0 | µg/L | U | MBD, MDLRL |
| Chrysene | SW8270C | EB 3-22-22 | 2203b95-001c | ND | 0.10 | µg/L | UJ | LIS |
| Cobalt, Dissolved | E 200.7 | OW-12A | 2203B95-003E | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | NAPIS-3 | 2203B95-005E | 0.0027 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | NAPIS-3 | 2203B95-005D | 0.0038 | 0.0060 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Cobalt, Total | E 200.7 | NAPIS-2 | 2203B95-006D | 0.0036 | 0.0060 | mg/L | J | MDLRL |
| Ethylbenzene | SW8260B | OW-12A | 2203b95-003a | 0.56 | 1.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-12A | 2203b95-003a | 0.84 | 1.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | NAPIS-2 | 2203b95-006a | 9.4 | 10 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-70 | 2203B95-002E | 0.00019 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-12A | 2203B95-003E | 0.00041 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | KA-3 | 2203B95-004E | 0.00027 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | NAPIS-2 | 2203B95-006E | 0.00026 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-3-22-22 | 2203B95-008E | 0.00014 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | NAPIS-3 | 2203B95-005D | 0.0013 | 0.00050 | mg/L | JB | EBD |
| Lead, Total | E200.8 | EB 3-22-22 | 2203B95-001D | 0.00027 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | KA-3 | 2203B95-004D | 0.00052 | 0.00050 | mg/L | JB | EBD |
| Naphthalene | SW8270C | OW-70 | 2203b95-002c | 0.18 | 0.10 | µg/L | J | ERPD-FD |
| Naphthalene | SW8270C | DUP-3-22-22 | 2203b95-008c | 0.26 | 0.10 | µg/L | J | ERPD-FD |
| n-Butylbenzene | SW8260B | OW-70 | 2203b95-002a | 0.97 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | NAPIS-3 | 2203b95-005a | 0.32 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP-3-22-22 | 2203b95-008a | 0.96 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-12A | 2203B95-003E | 0.0086 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-70 | 2203B95-002D | 0.047 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-12A | 2203B95-003D | 0.014 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | KA-3 | 2203B95-004D | 0.022 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | NAPIS-3 | 2203B95-005D | 0.025 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | NAPIS-2 | 2203B95-006D | 0.053 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OAPIS-1 | 2203B95-007D | 0.16 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | DUP-3-22-22 | 2203B95-008D | 0.046 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB 3-22-22 | 2203B95-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| n-Propylbenzene | SW8260B | OW-70 | 2203b95-002a | 0.97 | 1.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|------------------|
| n-Propylbenzene | SW8260B | KA-3 | 2203b95-004a | 0.69 | 1.0 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | NAPIS-2 | 2203b95-006a | 8.2 | 10 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | DUP-3-22-22 | 2203b95-008a | 0.92 | 1.0 | µg/L | J | MDLRL |
| Phenol | SW8270C | NAPIS-3 | 2203B95-005C | 4.2 | 5.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | NAPIS-3 | 2203b95-005c | 0.18 | 0.20 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB 3-22-22 | 2203b95-001c | ND | 0.20 | µg/L | UJ | LIS |
| sec-Butylbenzene | SW8260B | OW-12A | 2203b95-003a | 0.42 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | KA-3 | 2203b95-004a | 0.25 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | NAPIS-3 | 2203b95-005a | 0.73 | 1.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-12A | 2203B95-003E | 0.00052 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | NAPIS-2 | 2203B95-006E | 0.00046 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-70 | 2203B95-002D | 0.00072 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-12A | 2203B95-003D | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | NAPIS-3 | 2203B95-005D | 0.00062 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | NAPIS-2 | 2203B95-006D | 0.00062 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-3-22-22 | 2203B95-008D | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Toluene | SW8260B | DUP-3-22-22 | 2203b95-008a | 0.21 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | EB 3-22-22 | 2203B95-001C | 0.026 | 0.064 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | NAPIS-3 | 2203B95-005C | 0.65 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | NAPIS-2 | 2203B95-006C | 2.4 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OAPIS-1 | 2203B95-007C | 7.0 | 0.32 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | DUP-3-22-22 | 2203B95-008C | 1.1 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH GRO | SW8015 | OW-70 | 2203b95-002a | 0.67 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OW-12A | 2203b95-003a | 5.2 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | NAPIS-3 | 2203b95-005a | 0.69 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | NAPIS-2 | 2203b95-006a | 3.5 | 0.50 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OAPIS-1 | 2203b95-007a | 0.56 | 0.25 | mg/L | J- | LR-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-------------------------|
| TPH GRO | SW8015 | DUP-3-22-22 | 2203b95-008a | 0.69 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | KA-3 | 2203b95-004a | 0.31 | 0.050 | mg/L | JB | LR-MS, MBD |
| TPH GRO | SW8015 | EB 3-22-22 | 2203b95-001a | 0.034 | 0.050 | mg/L | U | LR-MS, MBD, MDLRL |
| TPH ORO | SW8015 | OW-70 | 2203B95-002C | 0.067 | 0.080 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | OAPIS-1 | 2203B95-007C | 0.96 | 0.40 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH ORO | SW8015 | NAPIS-3 | 2203B95-005C | 0.091 | 0.080 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH ORO | SW8015 | NAPIS-2 | 2203B95-006C | 0.16 | 0.080 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH ORO | SW8015 | DUP-3-22-22 | 2203B95-008C | 0.058 | 0.080 | mg/L | J+ | ERPD-LCS, HR-LCS, MDLRL |
| Trichloroethene | SW8260B | KA-3 | 2203b95-004a | 0.30 | 1.0 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-70 | 2203B95-002E | 0.0035 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-12A | 2203B95-003E | 0.0027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | KA-3 | 2203B95-004E | 0.017 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OAPIS-1 | 2203B95-007E | 0.024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-3-22-22 | 2203B95-008E | 0.0037 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-70 | 2203B95-002D | 0.018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-12A | 2203B95-003D | 0.034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | KA-3 | 2203B95-004D | 0.019 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPIS-3 | 2203B95-005D | 0.0068 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPIS-2 | 2203B95-006D | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OAPIS-1 | 2203B95-007D | 0.029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-3-22-22 | 2203B95-008D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | KA-3 | 2203b95-004a | 0.85 | 1.50 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | KA-3 | 2203B95-004E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OAPIS-1 | 2203B95-007E | 0.025 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-3-22-22 | 2203B95-008E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-70 | 2203B95-002E | 0.0086 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-12A | 2203B95-003E | 0.0091 | 0.010 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | NAPIS-3 | 2203B95-005E | 0.0056 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | NAPIS-2 | 2203B95-006E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-22-22 | 2203B95-001E | 0.0065 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | KA-3 | 2203B95-004D | 0.0075 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | NAPIS-3 | 2203B95-005D | 0.0083 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/23/2022 |
| Date Validated: 07/11/2022 | Sample End Date: 03/23/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203C69 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.





Tier II Data Validation Report Summary

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-3-23-22 | 2203C69-001 |
| OW-54 | 2203C69-002 |
| OW-66 | 2203C69-003 |
| OW-55 | 2203C69-004 |
| OW-13 | 2203C69-005 |
| OW-56 | 2203C69-006 |
| OW-59 | 2203C69-007 |
| OW-60 | 2203C69-008 |
| MKTF-16 | 2203C69-009 |
| DUP-3-23-22 | 2203C69-010 |
| FB-3-23-22 | 2203C69-011 |
| Trip Blank | 2203C69-012 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 779 data points. The data completeness calculation does not include any submitted blank sample results. One data point was rejected. The data completeness measure for this data package is calculated to be 99.87% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Naphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample OW-55.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for the following sample: OW-66.

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

E – Estimated value. *This laboratory flag was applied only to QC sample and surrogate results in the laboratory report, and qualification of sample data was not required.*

J – Analyte detected below quantitation limits

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

D – Sample diluted due to matrix.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|---------------------|-----------------------------------|-----------------|
| 200.7 | OW-66 | Total and Dissolved Barium | 5 |
| 200.7 | OW-60 | Total Barium | 5 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 8015D | OW-54 | GRO | 5 |
| 8260B | OW-54 | Select VOCs | 5 |
| 200.8 | OW-66, OW-55, OW-59 | Select Total and Dissolved Metals | 10 |
| 8015D | OW-66 | DRO and MRO | 10 |
| 8260B | MKTF-16 | Benzene | 10 |
| 8260B | DUP-3-23-22 | MTBE | 10 |
| 8270C | OW-66 | SVOCs | 10 |
| 200.8 | OW-56 | Dissolved Antimony | 20 |
| 8015D | OW-66, OW-55 | GRO | 50 |



| VALIDATION CRITERIA CHECKLIST | | | | |
|-------------------------------|--------|--------------|---------------------|-----------------|
| | Method | Sample(s) | Analyte(s) | Dilution Factor |
| | 8260B | OW-54 | MTBE | 50 |
| | 8260B | OW-66, OW-55 | Select VOCs | 50 |
| | 8260B | OW-66 | Benzene and Toluene | 500 |
| | 8260B | OW-55 | Benzene | 500 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.3°C and 2.3°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.7°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------------|----------------------|---------------|-------------------|
| 8015D | DRO | 66385 | 0.044 mg/L |
| 8015D | DRO | 66409 | 0.040 mg/L |
| 8015D | MRO | 66409 | 0.099 mg/L |
| 8260B | Chloromethane | R86734 | 0.66 µg/L |
| 8260B | Carbon disulfide | R86760 | 0.87 µg/L |
| 8260B | Chloromethane | R86760 | 0.69 µg/L |
| 8260B | Trichloroethene | R86760 | 0.34 µg/L |
| 8260B | Vinyl Chloride | R86760 | 0.47 µg/L |
| 8270 SIM | Pyrene | R87058 | 0.16 µg/L |
| 8015D | GRO | G86734 | 0.041 mg/L |

Detections of DRO, chloromethane, and GRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of DRO, MRO, and GRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-------------------|-----------|-------------------|
| 200.7 | Total Metals | 66644 | OW-54, OW-66 |
| 200.7 | Dissolved Metals | B86825 | Not Prepared |
| 200.8 | Total Metals | 66472 | EB-3-23-22 |
| 200.8 | Dissolved Metals | B86714 | Not Prepared |
| 245.1 | Total Mercury | 66425 | EB-3-23-22 |
| 245.1 | Dissolved Mercury | 66456 | Not Prepared |
| 504.1 | EDB | 66393 | Not Prepared |
| 504.1 | EDB | 66394 | Not Prepared |
| 4500CN E | Cyanide | WG1839312 | EB-3-23-22, OW-56 |
| 8015D | TPH DRO and MRO | 66385 | Not Prepared |
| 8015D | TPH DRO and MRO | 66409 | Not Prepared |
| 8015D | TPH GRO | G86734 | Not Prepared |
| 8260B | VOCs | R86734 | Not Prepared |
| 8260B | VOCs | R86760 | Not Prepared |
| 8270C | SVOCs | 66392 | Not Prepared |
| 8270C SIM | SVOCs | R86913 | Not Prepared |
| 8270C SIM | SVOCs | R87058 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | MS Recovery | MSD Recovery | MS/MSD QC Limits | MS/MSD RPD | RPD QC Limits |
|-----------|---------|-----------|-------------|--------------|------------------|------------|---------------|
| 4500 CN E | Cyanide | WG1839312 | Acceptable | 28.4% | 75-125% | 110% | 20% |
| 4500 CN E | Cyanide | WG1839312 | Acceptable | 73.1% | 75-125% | 29.5% | 20% |

Two MS/MSD pairs were analyzed for cyanide in batch WG1839312. The MSD recoveries were below the NFG QC limits for both of the MS/MSD pairs, but the MSD recovery for one of the pairs was less than 30%. The results for all of the associated samples in the batch would typically be qualified based on the MS/MSD results. However, since multiple MS/MSD pairs were analyzed for this batch, the determination of batch sample associations would be arbitrary. Therefore, only the parent sample EB-3-23-22 used for the MS/MSD pair that recovered at 28.4% was qualified as R to indicate rejected (not usable) data based on evidence of extreme low bias. The remaining samples were qualified as J- if detected and UJ if not detected.

In addition, both MS/MSD pairs exhibited MS/MSD RPDs that exceeded the laboratory QC limit indicating poor precision.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS / LCSD RPD | RPD QC Limits |
|-----------|------------------------|--------|--------------|---------------|--------------------|----------------|---------------|
| 200.7 | Total Nickel | 66644 | 67.0% | ----- | 70-130% | ----- | ----- |
| 8015D | DRO | 66385 | 107% | Acceptable | 31.7-75.4% | 56.8% | 20% |
| 8270C SIM | Phenanthrene | R87058 | Acceptable | Acceptable | 38.2-93.9% | 30.4% | 27.9% |
| 8270C SIM | Pyrene | R87058 | Acceptable | Acceptable | 51-113% | 29.5% | 20% |
| 8270C SIM | Benzo(a)anthracene | R87058 | Acceptable | Acceptable | 51-147% | 26.2% | 24.1% |
| 8270C SIM | Chrysene | R87058 | Acceptable | Acceptable | 55.3-115% | 33.0% | 20% |
| 8270C SIM | Benzo(b)fluoranthene | R87058 | Acceptable | Acceptable | 44.4-136% | 34.5% | 24.5% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | R87058 | Acceptable | Acceptable | 31.4-165% | 35.2% | 21.1% |

Total nickel results were assigned J- qualifiers in associated samples due to evidence of potential low bias, except the non-detect results for associated samples EB-3-23-22 and OW-13 which were assigned UJ qualifiers.

DRO was in the associated samples, and these results were qualified as J+ due to potential high bias. These associated DRO results were also qualified due to evidence of poor precision.

The Method 8270C SIM analytes with LCS/LCSD RPD values that were above the QC limits were not detected in the associated samples. These results were qualified as UJ due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| <u>Method</u> | <u>Surrogate</u> | <u>Sample</u> | <u>Surrogate Recovery</u> | <u>QC Limits</u> |
|---------------|----------------------|---------------|---------------------------|------------------|
| 8015D MOD | DNOP | OW-56 | 147% | 42.2-138% |
| 8270C | 2-Fluorophenol | OW-59 | 19.4% | 29.4-87.7% |
| 8270C | 2,4,6-Tribromophenol | OW-59 | 6.62% | 18.6-129% |

The target analytes DRO and MRO associated with the Method 8015 surrogate DNOP were detected in sample OW-56, and these results were assigned J+ qualifiers due to possible high bias.

The acid fraction target analytes associated with the identified non-compliant Method 8270C surrogate recoveries were not detected in sample OW-59. Normally, if a surrogate recovered below 10%, the associated analytes would be qualified as R, but one of the acid surrogates was acceptable and the recovery for the other acid surrogate was low but not below 10%. The associated acid fraction analytes were not detected in sample OW-59 and the results were assigned UJ qualifiers due to the evidence of low bias.

The SVOC results and the DRO and MRO results for sample OW-66 were not qualified based on the surrogate non-conformances in the Method 8270C and Method 8015D Modified analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Since Method 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples OW-66 and OW-55, and qualification of sample data was not required.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample OW-13, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-3-23-22, and one equipment blank sample, EB-3-23-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-------------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.69 µg/L |
| FB-3-23-22 | 8260B | 2-Butanone | 5.2 µg/L |
| FB-3-23-22 | 8260B | Chloromethane | 0.80 µg/L |
| EB-3-23-22 | 200.7 | Dissolved Nickel | 0.0035 mg/L |
| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
| EB-3-23-22 | 200.7 | Dissolved Zinc | 0.0063 mg/L |
| EB-3-23-22 | 8015D | DRO | 0.033 mg/L |
| EB-3-23-22 | 8015D | GRO | 0.034 mg/L |
| EB-3-23-22 | 8260B | 2-Butanone | 5.0 µg/L |
| EB-3-23-22 | 8260B | Chloromethane | 0.70 µg/L |

Detections of 2-butanone, dissolved nickel, and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved nickel and dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The DRO, chloromethane, and GRO results were previously qualified due to laboratory blank contamination in batches 66385, R86734, R86760, and G86734; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-23-22 was collected as a field duplicate of sample OW-54.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1839312 | Not Associated |
| 4500CN E | Cyanide | WG1839312 | OW-13 |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-54 | Antimony | ND | 0.00047 |
| DUP-3-23-22 | Antimony | ND | 0.00051 |
| OW-13 | Barium | 0.020 | 0.025 |
| OW-54 | Cobalt | 0.078 | 0.086 |
| OW-56 | Cobalt | 0.0069 | 0.0074 |
| OW-59 | Cobalt | 0.0043 | 0.0050 |
| DUP-3-23-22 | Cobalt | 0.081 | 0.085 |
| EB-3-23-22 | Nickel | ND | 0.0035 |
| OW-54 | Nickel | 0.24 | 0.27 |
| OW-66 | Nickel | 0.33 | 0.37 |
| OW-55 | Nickel | 0.24 | 0.26 |
| OW-13 | Nickel | ND | 0.0033 |
| OW-56 | Nickel | 0.072 | 0.083 |
| OW-59 | Nickel | 0.037 | 0.042 |
| DUP-3-23-22 | Nickel | 0.26 | 0.27 |
| EB-3-23-22 | Zinc | ND | 0.0063 |
| OW-13 | Zinc | ND | 0.0084 |
| OW-56 | Zinc | 0.010 | 0.012 |
| OW-59 | Zinc | 0.0064 | 0.0091 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-54
Field Duplicate Sample ID: DUP-3-23-22 | | | | |
|---|---------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.20 mg/L | 0.20 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.39 mg/L | 0.41 mg/L | 5.0% |
| Chromium, Total | E 200.7 | 0.0064 mg/L | 0.0053 mg/L | 18.8% +/-RL |
| Cobalt, Dissolved | E 200.7 | 0.086 mg/L | 0.085 mg/L | 1.2% |
| Cobalt, Total | E 200.7 | 0.078 mg/L | 0.081 mg/L | 3.8% |
| Nickel, Dissolved | E 200.7 | 0.27 mg/L | 0.27 mg/L | 0.0% |
| Nickel, Total | E 200.7 | 0.24 mg/L | 0.26 mg/L | 8.0% |
| Vanadium, Total | E 200.7 | 0.015 mg/L | 0.015 mg/L | 0.0% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.017 mg/L | 0.018 mg/L | 5.7% +/-RL |
| Zinc, Total | E 200.7 | 0.031 mg/L | 0.026 mg/L | 17.5% |
| Antimony, Dissolved | E200.8 | 0.00047 mg/L | 0.00051 mg/L | 8.2% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0081 mg/L | 0.0091 mg/L | 11.6% |
| Arsenic, Total | E200.8 | 0.0098 mg/L | 0.0091 mg/L | 7.4% |
| Lead, Dissolved | E200.8 | 0.0064 mg/L | 0.0076 mg/L | 17.1% |
| Lead, Total | E200.8 | 0.023 mg/L | 0.020 mg/L | 14.0% |
| Selenium, Total | E200.8 | 0.0012 mg/L | 0.00086 mg/L | 33.0% +/-RL |
| Mercury, Total | E245.1 | 0.00014 mg/L | ND (0.00020 mg/L) | DL |
| Cyanide, Total | E335.4 | 0.00527 mg/L | ND (0.00500 mg/L) | DL |
| TPH DRO | SW8015 | 2.2 mg/L | 2.3 mg/L | 4.4% |
| TPH GRO | SW8015 | 2.0 mg/L | 1.9 mg/L | 5.1% |
| TPH ORO | SW8015 | 0.13 mg/L | 0.16 mg/L | 20.7% +/-RL |
| 1,1-Dichloroethane | SW8260B | ND (5.0 µg/L) | 0.63 µg/L | DL |
| 1,2,4-Trimethylbenzene | SW8260B | 4.2 µg/L | 4.5 µg/L | 6.9% |
| 1,2-Dichloroethane | SW8260B | 2.3 µg/L | 0.68 µg/L | 108.7% +/-RL |
| Benzene | SW8260B | 12 µg/L | 12 µg/L | 0.0% |
| Chloroform | SW8260B | 1.6 µg/L | ND (1.0 µg/L) | DL |
| Chloromethane | SW8260B | 3.9 µg/L | 1.8 µg/L | 73.7% +/-RL |
| Ethylbenzene | SW8260B | 13 µg/L | 13 µg/L | 0.0% |
| Isopropylbenzene | SW8260B | ND (5.0 µg/L) | 0.46 µg/L | DL |
| MTBE | SW8260B | 1,300 µg/L | 1,200 µg/L | 8.0% |
| n-Propylbenzene | SW8260B | 1.2 µg/L | 1.2 µg/L | 0.0% +/-RL |
| sec-Butylbenzene | SW8260B | ND (5.0 µg/L) | 0.58 µg/L | DL |
| Toluene | SW8260B | ND (5.0 µg/L) | 0.36 µg/L | DL |
| Vinyl Chloride | SW8260B | ND (5.0 µg/L) | 0.46 µg/L | DL |
| Xylenes, Total | SW8260B | 2.0 µg/L | 2.4 µg/L | 18.2% +/-RL |
| Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020. | | | | |
| DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and | | | | |



therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| EBD | Equipment blank detection |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| ERPD-MS | The MS/MSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1,1-Trichloroethane | SW8260B | MKTF-16 | 2203c69-009a | 0.61 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-66 | 2203c69-003a | 27 | 50 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-56 | 2203c69-006a | 0.58 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.63 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-54 | 2203c69-002a | 4.2 | 5.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-56 | 2203c69-006a | 0.22 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-54 | 2203c69-002a | 2.3 | 5.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-66 | 2203c69-003a | 21 | 50 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-13 | 2203c69-005a | 0.76 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.68 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | MKTF-16 | 2203c69-009a | 0.61 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-60 | 2203c69-008c | 0.24 | 1.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1-Methylnaphthalene | SW8270C | OW-66 | 2203C69-003C | 25 | 50 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-66 | 2203C69-003C | 22 | 50 | µg/L | J | MDLRL |
| 2,4-Dinitrophenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2-Butanone | SW8260B | EB-3-23-22 | 2203c69-001a | 5.0 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | FB-3-23-22 | 2203c69-011a | 5.2 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-66 | 2203C69-003C | 46 | 50 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-66 | 2203C69-003C | 25 | 50 | µg/L | J | MDLRL |
| 3,4-Methylphenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-66 | 2203C69-003C | 40 | 50 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | OW-54 | 2203C69-002E | 0.00047 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | DUP-3-23-22 | 2203C69-010E | 0.00051 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-13 | 2203C69-005E | 0.00074 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-59 | 2203C69-007E | 0.0047 | 0.010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-60 | 2203C69-008E | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-13 | 2203C69-005D | 0.00075 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | OW-13 | 2203c69-005a | 0.29 | 1.0 | µg/L | J | MDLRL |
| Benzene | SW8260B | OW-56 | 2203c69-006a | 0.91 | 1.0 | µg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-55 | 2203C69-004C | 4.6 | 10 | µg/L | J | MDLRL |
| Chloroform | SW8260B | OW-54 | 2203c69-002a | 1.6 | 5.0 | µg/L | J | MDLRL |
| Chloroform | SW8260B | OW-55 | 2203c69-004a | 11 | 50 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Chloromethane | SW8260B | EB-3-23-22 | 2203c69-001a | 0.70 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-54 | 2203c69-002a | 3.9 | 15 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-66 | 2203c69-003a | 54 | 150 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-55 | 2203c69-004a | 40 | 150 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-56 | 2203c69-006a | 1.6 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-59 | 2203c69-007a | 0.66 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-60 | 2203c69-008a | 0.70 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-16 | 2203c69-009a | 0.78 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP-3-23-22 | 2203c69-010a | 1.8 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB-3-23-22 | 2203c69-011a | 0.80 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203c69-012a | 0.69 | 3.0 | µg/L | U | MBD, MDLRL |
| Chromium, Dissolved | E 200.7 | OW-60 | 2203C69-008E | 0.0044 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-59 | 2203C69-007D | 0.0028 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-3-23-22 | 2203C69-010D | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Chrysene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Cobalt, Dissolved | E 200.7 | OW-66 | 2203C69-003E | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-59 | 2203C69-007E | 0.0050 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-60 | 2203C69-008E | 0.0027 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-59 | 2203C69-007D | 0.0043 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-54 | 2203C69-002F | 0.00527 | 0.00500 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-66 | 2203C69-003F | 0.00756 | 0.00500 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-59 | 2203C69-007F | 0.0191 | 0.00500 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-60 | 2203C69-008F | 0.00928 | 0.00500 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | EB-3-23-22 | 2203C69-001F | ND | 0.00500 | mg/L | R | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-55 | 2203C69-004F | ND | 0.00500 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-13 | 2203C69-005F | ND | 0.00500 | mg/L | UJ | ERPD-MS, LR-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Cyanide, Total | E335.4 | OW-56 | 2203C69-006F | ND | 0.00500 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | DUP-3-23-22 | 2203C69-010F | ND | 0.00500 | mg/L | UJ | ERPD-MS, LR-MS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | OW-66 | 2203c69-003a | 17 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-55 | 2203c69-004a | 23 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.46 | 1.0 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-56 | 2203C69-006E | 0.00015 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-59 | 2203C69-007E | 0.00061 | 0.0050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-13 | 2203C69-005D | 0.000067 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-59 | 2203C69-007D | 0.0020 | 0.0025 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-54 | 2203C69-002D | 0.00014 | 0.0002 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-59 | 2203C69-007D | 0.00013 | 0.0002 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | MKTF-16 | 2203c69-009c | 0.08 | 0.10 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-66 | 2203c69-003a | 13 | 150 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-16 | 2203c69-009a | 0.29 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-60 | 2203C69-008E | 0.012 | 0.010 | mg/L | JB | EBD |
| Nickel, Dissolved | E 200.7 | OW-13 | 2203C69-005E | 0.0033 | 0.010 | mg/L | U | EBD, MDLRL |
| Nickel, Dissolved | E 200.7 | EB-3-23-22 | 2203C69-001E | 0.0035 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-54 | 2203C69-002D | 0.24 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-66 | 2203C69-003D | 0.33 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-55 | 2203C69-004D | 0.24 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-56 | 2203C69-006D | 0.072 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-59 | 2203C69-007D | 0.037 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-60 | 2203C69-008D | 0.084 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | DUP-3-23-22 | 2203C69-010D | 0.26 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-3-23-22 | 2203C69-001D | ND | 0.010 | mg/L | UJ | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|------------------------------|
| Nickel, Total | E 200.7 | OW-13 | 2203C69-005D | ND | 0.010 | mg/L | UJ | LR-LCS |
| n-Propylbenzene | SW8260B | OW-54 | 2203c69-002a | 1.2 | 5.0 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-59 | 2203C69-007C | ND | 5.0 | µg/L | UJ | LR-SUR |
| Phenol | SW8270C | OW-66 | 2203C69-003C | 46 | 50 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-16 | 2203c69-009a | 0.21 | 1.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | MKTF-16 | 2203c69-009c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-3-23-22 | 2203c69-010c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| sec-Butylbenzene | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.58 | 1.0 | µg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-56 | 2203C69-006D | 0.00082 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-59 | 2203C69-007D | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-3-23-22 | 2203C69-010D | 0.00086 | 0.001 | mg/L | J | MDLRL |
| Toluene | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.36 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-54 | 2203C69-002C | 2.2 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-66 | 2203C69-003C | 6.6 | 0.64 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-55 | 2203C69-004C | 3.6 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-56 | 2203C69-006C | 1.1 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS, HR-SUR |
| TPH DRO | SW8015 | OW-59 | 2203C69-007C | 0.49 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-60 | 2203C69-008C | 0.092 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | EB-3-23-22 | 2203C69-001C | 0.033 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-13 | 2203C69-005C | 0.036 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | OW-13 | 2203c69-005a | 0.15 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | OW-60 | 2203c69-008a | 0.066 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | EB-3-23-22 | 2203c69-001a | 0.034 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH ORO | SW8015 | DUP-3-23-22 | 2203C69-010C | 0.16 | 0.080 | mg/L | JB | MBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH ORO | SW8015 | OW-56 | 2203C69-006C | 0.24 | 0.080 | mg/L | J+ | HR-SUR |
| Vanadium, Dissolved | E 200.7 | OW-66 | 2203C69-003E | 0.0029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-55 | 2203C69-004E | 0.0039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-56 | 2203C69-006E | 0.0033 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-59 | 2203C69-007E | 0.0034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-60 | 2203C69-008E | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-54 | 2203C69-002D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-66 | 2203C69-003D | 0.034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-55 | 2203C69-004D | 0.023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-13 | 2203C69-005D | 0.0025 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-56 | 2203C69-006D | 0.0083 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-59 | 2203C69-007D | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-3-23-22 | 2203C69-010D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-16 | 2203c69-009a | 0.65 | 1.0 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | DUP-3-23-22 | 2203c69-010a | 0.46 | 1.0 | µg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-54 | 2203c69-002a | 2.0 | 7.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-54 | 2203C69-002E | 0.017 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-55 | 2203C69-004E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-56 | 2203C69-006E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-60 | 2203C69-008E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-3-23-22 | 2203C69-010E | 0.018 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-66 | 2203C69-003E | 0.0081 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-13 | 2203C69-005E | 0.0084 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-59 | 2203C69-007E | 0.0091 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-3-23-22 | 2203C69-001E | 0.0063 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-59 | 2203C69-007D | 0.0064 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/24/2022 |
| Date Validated: 06/28/2022 | Sample End Date: 03/24/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203D54 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks





Tier II Data Validation Report Summary

- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-3-24-22 | 2203D54-001 |
| OW-30 | 2203D54-002 |
| OW-64 | 2203D54-003 |
| OW-14 | 2203D54-004 |
| STP-1-NW | 2203D54-005 |
| MKTF-44 | 2203D54-006 |
| DUP-3-24-22 | 2203D54-007 |
| FB-3-24-22 | 2203D54-008 |
| Trip Blank | 2203D54-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

"S" flagged denote that the surrogate recoveries are outside of the standard limits due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

D – Sample diluted due to matrix.

E – Estimated value. *This laboratory flag was applied only to QC sample and surrogate results in the laboratory report, and qualification of sample data was not required.*

J – Analyte detected below quantitation limits.

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|---------------------------|-----------------------------------|-----------------|
| 200.7 | OW-14 | Total and Dissolved Barium | 5 |
| 200.8 | STP-1-NW, MKTF-44 | Select Total and Dissolved Metals | 5 |
| 504.1 | Multiple Samples | EDB | 5 |
| 8015D | OW-14 | DRO and MRO | 10 |
| 8015D | OW-14 | GRO | 20 |
| 8260B | OW-14 | Ethylbenzene | 50 |
| 8260B | OW-30, OW-14, DUP-3-24-22 | MTBE | 50 |
| 8260B | OW-14 | Benzene | 1,000 |



VALIDATION CRITERIA CHECKLIST

| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No | | | | | | | | | | | | | | | | | | | | |
|--|------------|--------|----------------------|-------|---------------|-------|-----|-------|------------|-------|-----|-------|------------|-------|------------|--------|----------------------|----------|--------|--------|----------------------|
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | | | | | | | | | | | | | | | | | | | | | |
| 6. Were samples received in good condition within method-specified requirements? | Yes | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 2.9°C, 3.5°C, and 4.0°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 3.7°C as noted on the CoC.</p> | | | | | | | | | | | | | | | | | | | | | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | | | | | | | | | | | | | | | | | | | | | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | | | | | | | | | | | | | | | | | | | | | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | | | | | | | | | | | | | | | | | | | | | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | | | | | | | | | | | | | | | | | | | | | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | | | | | | | | | | | | | | | | | | | | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.</p> <table border="1" data-bbox="420 1419 1198 1619"> <thead> <tr> <th>Method</th> <th>Analyte</th> <th>Batch</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>8015D</td> <td>DRO</td> <td>66409</td> <td>0.040 mg/L</td> </tr> <tr> <td>8015D</td> <td>MRO</td> <td>66409</td> <td>0.099 mg/L</td> </tr> <tr> <td>8260B</td> <td>Chloroform</td> <td>A86942</td> <td>0.21 $\mu\text{g/L}$</td> </tr> <tr> <td>8270 SIM</td> <td>Pyrene</td> <td>R87058</td> <td>0.16 $\mu\text{g/L}$</td> </tr> </tbody> </table> <p>Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.</p> | | Method | Analyte | Batch | Concentration | 8015D | DRO | 66409 | 0.040 mg/L | 8015D | MRO | 66409 | 0.099 mg/L | 8260B | Chloroform | A86942 | 0.21 $\mu\text{g/L}$ | 8270 SIM | Pyrene | R87058 | 0.16 $\mu\text{g/L}$ |
| Method | Analyte | Batch | Concentration | | | | | | | | | | | | | | | | | | |
| 8015D | DRO | 66409 | 0.040 mg/L | | | | | | | | | | | | | | | | | | |
| 8015D | MRO | 66409 | 0.099 mg/L | | | | | | | | | | | | | | | | | | |
| 8260B | Chloroform | A86942 | 0.21 $\mu\text{g/L}$ | | | | | | | | | | | | | | | | | | |
| 8270 SIM | Pyrene | R87058 | 0.16 $\mu\text{g/L}$ | | | | | | | | | | | | | | | | | | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-------------------|-----------|-----------------------|
| 200.7 | Total Metals | 66644 | Not Prepared |
| 200.7 | Dissolved Metals | A87332 | DUP-3-24-22 |
| 200.7 | Dissolved Metals | C86825 | OW-30, EB-3-24-22 |
| 200.8 | Total Metals | 66472 | Not Prepared |
| 200.8 | Total Metals | 66473 | MKTF-44 |
| 200.8 | Dissolved Metals | B86786 | Not Prepared |
| 245.1 | Total Mercury | 66425 | Not Prepared |
| 245.1 | Dissolved Mercury | 66456 | Not Prepared |
| 504.1 | EDB | 66394 | Trip Blank |
| 4500CN E | Cyanide | WG1841516 | OW-30, Not Associated |
| 8015D | TPH DRO and MRO | 66409 | Not Prepared |
| 8015D | TPH GRO | A86911 | EB-3-24-22 |
| 8015D | TPH GRO | B86939 | Not Prepared |
| 8260B | VOCs | A86942 | Not Prepared |
| 8260B | VOCs | A86972 | Not Prepared |
| 8260B | VOCs | A87014 | Not Prepared |
| 8270C | SVOCs | 66423 | Not Prepared |
| 8270C SIM | SVOCs | R87058 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

The MS and MSD recoveries for total antimony in Method 200.8 batch 66473 were outside the QC limits of 75-125% at 58.8% and 54.9%, respectively. Total antimony was not detected in the associated samples, and these results were qualified as UJ due to evidence of potential low bias.

The MS recovery for cyanide in Method 4500 CN E batch WG1841516 was outside the laboratory QC limits of 90-110% at 89.9%. However, the recovery was within data validation limits of 75-125%. Validation action was not required.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 66644 | 67.0% | ----- | 70-130% | ----- | ----- |
| 8270C SIM | Phenanthrene | R87058 | Acceptable | Acceptable | 38.2-93.9% | 30.4% | 27.9% |
| 8270C SIM | Pyrene | R87058 | Acceptable | Acceptable | 51-113% | 29.5% | 20% |
| 8270C SIM | Benzo(a)anthracene | R87058 | Acceptable | Acceptable | 51-147% | 26.2% | 24.1% |
| 8270C SIM | Chrysene | R87058 | Acceptable | Acceptable | 55.3-115% | 33.0% | 20% |
| 8270C SIM | Benzo(b)fluoranthene | R87058 | Acceptable | Acceptable | 44.4-136% | 34.5% | 24.5% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | R87058 | Acceptable | Acceptable | 31.4-165% | 35.2% | 21.1% |

Associated samples with detections for total nickel were qualified with J- flags due to possible low bias., and the associated samples with non-detections for total nickel were qualified with a UJ flag due to possible low bias.

The analytes with LCS/LCSD RPD values that were above the QC limit that were not detected in the associated samples were qualified as UJ due to evidence of poor precision. The detected phenanthrene and pyrene results were qualified as J due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

The Method 8015D surrogate BFB was recovered in sample OW-64 above the acceptance limits of 70-130% at 317%. The target analyte, GRO, associated with this surrogate that was detected in sample OW-64 was assigned a J+ qualifier due to evidence of potential high bias.

The DRO and MRO results for sample OW-14 were not qualified based on the surrogate non-conformance in the Method 8015D analysis since the applied dilution of 10 times resulted in a surrogate concentration below routinely calibrated levels, and this result was deemed unreliable and possibly inaccurate.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample OW-14, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-3-24-22, and one equipment blank sample, EB-3-24-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Benzene | 0.57 µg/L |
| Trip Blank | 8260B | Chloroform | 0.20 µg/L |
| FB-3-24-22 | 8260B | 2-Butanone | 6.2 µg/L |
| FB-3-24-22 | 8260B | Benzene | 0.75 µg/L |
| FB-3-24-22 | 8260B | Ethylbenzene | 0.25 µg/L |
| EB-3-24-22 | 200.7 | Dissolved Zinc | 0.0071 mg/L |
| EB-3-24-22 | 8015D | DRO | 0.027 mg/L |
| EB-3-24-22 | 8015D | MRO | 0.09 mg/L |
| EB-3-24-22 | 8260B | 2-Butanone | 9.2 µg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloroform, DRO, and MRO results were previously qualified due to laboratory blank contamination in batches A86942, 66409, and 66409, respectively; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-24-22 was collected as a field duplicate of sample OW-30.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1841516 | EB-3-24-22 |
| 4500CN E | Cyanide | WG1841516 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the cyanide results for both measurements were non-detections.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No



VALIDATION CRITERIA CHECKLIST

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| OW-30 | Arsenic | 0.00066 | 0.00084 |
| OW-64 | Arsenic | 0.0023 | 0.0024 |
| DUP-3-24-22 | Arsenic | 0.00071 | 0.00073 |
| OW-30 | Barium | 0.14 | 0.16 |
| OW-64 | Barium | 0.32 | 0.33 |
| DUP-3-24-22 | Barium | 0.14 | 0.16 |
| OW-30 | Cobalt | 0.0042 | 0.0046 |
| OW-14 | Cobalt | 0.0049 | 0.0050 |
| OW-30 | Nickel | 0.082 | 0.085 |
| OW-14 | Nickel | 0.086 | 0.089 |
| DUP-3-24-22 | Nickel | 0.084 | 0.085 |
| STP-1-NW | Selenium | 0.0057 | 0.0063 |
| STP-1-NW | Silver | ND | 0.0024 |
| EB-3-24-22 | Zinc | ND | 0.0071 |
| OW-30 | Zinc | ND | 0.0052 |
| OW-64 | Zinc | ND | 0.0081 |
| OW-14 | Zinc | ND | 0.0091 |
| DUP-3-24-22 | Zinc | ND | 0.0080 |

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-30
Field Duplicate Sample ID: DUP-3-24-22 | | | | |
|--|-----------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.16 mg/L | 0.16 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.14 mg/L | 0.14 mg/L | 0.0% |
| Cobalt, Dissolved | E 200.7 | 0.0046 mg/L | 0.0052 mg/L | 12.2% +/-RL |
| Cobalt, Total | E 200.7 | 0.0042 mg/L | 0.0052 mg/L | 21.3% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.085 mg/L | 0.085 mg/L | 0.0% |
| Nickel, Total | E 200.7 | 0.082 mg/L | 0.084 mg/L | 2.4% |
| Zinc, Dissolved | E 200.7 | 0.0052 mg/L | 0.0080 mg/L | 42.4% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.00084 mg/L | 0.00073 mg/L | 14.0% +/-RL |
| Arsenic, Total | E200.8 | 0.00066 mg/L | 0.00071 mg/L | 7.3% +/-RL |
| Lead, Dissolved | E200.8 | 0.00053 mg/L | 0.00055 mg/L | 3.7% +/-RL |
| Lead, Total | E200.8 | 0.00087 mg/L | 0.00088 mg/L | 1.1% +/-RL |
| Cyanide, Total | 4500 CN E | 0.00562 mg/L | 0.00726 mg/L | 25.5% +/-RL |
| TPH DRO | SW8015 | 0.74 mg/L | 0.89 mg/L | 18.4% |
| TPH GRO | SW8015 | 1.4 mg/L | 1.3 mg/L | 7.4% |
| TPH ORO | SW8015 | 0.11 mg/L | 0.095 mg/L | 14.6% +/-RL |
| 1,2,4-Trimethylbenzene | SW8260B | 0.54 µg/L | 0.26 µg/L | 70.0% +/-RL |
| 1,2-Dichloroethane | SW8260B | 0.42 µg/L | 0.42 µg/L | 0.0% +/-RL |
| Acetone | SW8260B | 3.1 µg/L | 2.9 µg/L | 6.7% +/-RL |
| Ethylbenzene | SW8260B | ND (1.0 µg/L) | 0.34 µg/L | DL |
| MTBE | SW8260B | 1,400 µg/L | 1,400 µg/L | 0.0% |
| Toluene | SW8260B | 0.20 µg/L | ND (1.0 µg/L) | DL |
| Xylenes, Total | SW8260B | 0.85 µg/L | ND (1.5 µg/L) | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| EBD | Equipment blank detection |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | OW-14 | 2203d54-004a | 0.38 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-30 | 2203d54-002a | 0.54 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | STP-1-NW | 2203d54-005a | 0.18 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP-3-24-22 | 2203d54-007a | 0.26 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-30 | 2203d54-002a | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-14 | 2203d54-004a | 0.80 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-3-24-22 | 2203d54-007a | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | OW-14 | 2203d54-004a | 0.47 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | STP-1-NW | 2203d54-005c | 0.14 | 1.0 | µg/L | J | MDLRL |
| 2-Butanone | SW8260B | EB-3-24-22 | 2203d54-001a | 9.2 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | FB-3-24-22 | 2203d54-008a | 6.2 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | OW-30 | 2203d54-002a | 3.1 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | OW-64 | 2203d54-003a | 4.4 | 10 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Acetone | SW8260B | DUP-3-24-22 | 2203d54-007a | 2.9 | 10 | µg/L | J | MDLRL |
| Antimony, Total | E200.8 | MKTF-44 | 2203D54-006D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Antimony, Total | E200.8 | DUP-3-24-22 | 2203D54-007D | ND | 0.0010 | mg/L | UJ | LR-MS |
| Arsenic, Dissolved | E200.8 | OW-30 | 2203D54-002E | 0.00084 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | STP-1-NW | 2203D54-005E | 0.0024 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-3-24-22 | 2203D54-007E | 0.00073 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-30 | 2203D54-002D | 0.00066 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-3-24-22 | 2203D54-007D | 0.00071 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | Trip Blank | 2203d54-009a | 0.57 | 1.0 | µg/L | J | MDLRL |
| Benzene | SW8260B | STP-1-NW | 2203D54-005A | 0.44 | 1.0 | µg/L | U | MDLRL, TBD |
| Benzene | SW8260B | FB-3-24-22 | 2203d54-008a | 0.75 | 1.0 | µg/L | U | MDLRL, TBD |
| Benzo(a)anthracene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-30 | 2203d54-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-64 | 2203d54-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-14 | 2203d54-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | STP-1-NW | 2203d54-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-30 | 2203d54-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-64 | 2203d54-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-14 | 2203d54-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | STP-1-NW | 2203d54-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chloroform | SW8260B | OW-64 | 2203d54-003a | 0.47 | 1.0 | µg/L | U | MBD, MDLRL |
| Chloroform | SW8260B | Trip Blank | 2203d54-009a | 0.20 | 1.0 | µg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Chromium, Dissolved | E 200.7 | MKTF-44 | 2203D54-006E | 0.0029 | 0.006 | mg/L | J | MDLRL |
| Chrysene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-30 | 2203d54-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-64 | 2203d54-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-14 | 2203d54-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | STP-1-NW | 2203d54-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Cobalt, Dissolved | E 200.7 | OW-30 | 2203D54-002E | 0.0046 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-14 | 2203D54-004E | 0.0050 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | DUP-3-24-22 | 2203D54-007E | 0.0052 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-30 | 2203D54-002D | 0.0042 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-14 | 2203D54-004D | 0.0049 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | STP-1-NW | 2203D54-005D | 0.0037 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | DUP-3-24-22 | 2203D54-007D | 0.0052 | 0.0060 | mg/L | J | MDLRL |
| Ethylbenzene | SW8260B | MKTF-44 | 2203d54-006a | 0.61 | 1.0 | µg/L | U | FBD, MDLRL |
| Ethylbenzene | SW8260B | DUP-3-24-22 | 2203d54-007a | 0.34 | 1.0 | µg/L | U | FBD, MDLRL |
| Ethylbenzene | SW8260B | FB-3-24-22 | 2203d54-008a | 0.25 | 1.0 | µg/L | J | MDLRL |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-30 | 2203d54-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-64 | 2203d54-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-14 | 2203d54-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | STP-1-NW | 2203d54-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | MKTF-44 | 2203D54-006E | 0.000090 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-14 | 2203D54-004D | 0.000097 | 0.00050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|--------|---------|-------|--------------------|----------------------|
| Lead, Total | E200.8 | STP-1-NW | 2203D54-005D | 0.0010 | 0.00250 | mg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-64 | 2203d54-003a | 0.98 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-14 | 2203d54-004a | 2.7 | 3.0 | µg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-30 | 2203D54-002D | 0.082 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-14 | 2203D54-004D | 0.086 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | DUP-3-24-22 | 2203D54-007D | 0.084 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-3-24-22 | 2203D54-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-64 | 2203D54-003D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | STP-1-NW | 2203D54-005D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-44 | 2203D54-006D | 0.0042 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| n-Propylbenzene | SW8260B | STP-1-NW | 2203d54-005a | 0.28 | 1.0 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | OW-64 | 2203d54-003c | 0.94 | 0.10 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | OW-14 | 2203d54-004c | 0.22 | 0.10 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | OW-30 | 2203d54-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | STP-1-NW | 2203d54-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| p-Isopropyltoluene | SW8260B | OW-64 | 2203d54-003a | 0.30 | 1.0 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | OW-14 | 2203d54-004a | 0.43 | 1.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-3-24-22 | 2203d54-001c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-30 | 2203d54-002c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-14 | 2203d54-004c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-44 | 2203d54-006c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-3-24-22 | 2203d54-007c | ND | 0.20 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-64 | 2203d54-003c | 0.44 | 0.20 | µg/L | JB | ERPD-LCS, MBD |
| Pyrene | SW8270C | STP-1-NW | 2203d54-005c | 0.16 | 0.20 | µg/L | U | ERPD-LCS, MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Selenium, Total | E200.8 | OW-64 | 2203D54-003D | 0.00039 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | STP-1-NW | 2203D54-005E | 0.0024 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-30 | 2203d54-002a | 0.20 | 1.0 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-64 | 2203d54-003a | 0.22 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | STP-1-NW | 2203D54-005C | 0.19 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-3-24-22 | 2203D54-001C | 0.027 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-44 | 2203D54-006C | 0.028 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-64 | 2203D54-003a | 0.66 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | OW-30 | 2203D54-002C | 0.11 | 0.080 | mg/L | JB | MBD |
| TPH ORO | SW8015 | EB-3-24-22 | 2203D54-001C | 0.090 | 0.080 | mg/L | U | MBD |
| TPH ORO | SW8015 | DUP-3-24-22 | 2203D54-007C | 0.095 | 0.080 | mg/L | U | MBD |
| Vanadium, Dissolved | E 200.7 | OW-64 | 2203D54-003E | 0.0035 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1-NW | 2203D54-005E | 0.034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-64 | 2203D54-003D | 0.0061 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | STP-1-NW | 2203D54-005D | 0.034 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-30 | 2203d54-002a | 0.85 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | STP-1-NW | 2203D54-005E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-44 | 2203D54-006E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-3-24-22 | 2203D54-001E | 0.0071 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-30 | 2203D54-002E | 0.0052 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-64 | 2203D54-003E | 0.0081 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-14 | 2203D54-004E | 0.0091 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-3-24-22 | 2203D54-007E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/08/2022 |
| Date Validated: 03/31/2022 revised 11/16/2022 | Sample End Date: 03/08/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203496 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist and Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-3-8-22 | 2203496-001 |
| BW-5C | 2203496-002 |
| BW-5B | 2203496-003 |
| OW-50 | 2203496-004 |
| OW-52 | 2203496-005 |
| OW-29 | 2203496-006 |
| MKTF-43 | 2203496-007 |
| OW-10 | 2203496-008 |
| DUP-3-8-22 | 2203496-009 |
| FB 3-8-22 | 2203496-010 |
| Trip Blank | 2203496-011 |

This data validation report was revised to incorporate data from a re-issued laboratory report with changes in analytes, results, and quality control information.





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)
- ✓ Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, February 2021.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| JB | Estimated concentration due to blank contamination |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 728 data points. The data completeness calculation does not include any submitted blank sample results. Sixty-eight data points were rejected. The data completeness measure for this data package is calculated to be 90.66% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270: Samples with "S" flagged surrogates were reextracted and reanalyzed to confirm the original data.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits

J – The identification of the analyte is acceptable; the reported value is an estimate.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – % RPD is outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|-------------------|-----------------------------------|------------------------|
| 200.7 | MKTF-43 | Select Dissolved Metals | 5 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 8015D | OW-29 | GRO | 5 |
| 200.8 | BW-5B | Barium (Total and Dissolved) | 10 |
| 200.8 | MKTF-43 | Select Total Metals | 10 |
| 200.8 | MKTF-43 | Select Dissolved Metals | 20 |
| 200.8 | BW-5C, DUP-3-8-22 | Total Barium | 50 |
| 8260B | OW-29 | MTBE | 100 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and therefore, was an acceptable replacement.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.0°C and 1.6°C as noted on the CoC and the <i>Sample Log-in Check List</i>. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> <p>Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 5.8°C as noted on the CoC.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.</p> <p>DRO was detected in the laboratory blank for Method 8015D batch 66084 at a concentration of 0.030 mg/L. DRO results in the associated samples that were less than the laboratory reporting limit were assigned U qualifiers. DRO results greater than the laboratory reporting limit but less than 10 times the blank concentration were qualified assigned JB qualifiers. Non-detections of DRO in the associated samples and results greater than ten times the blank concentration did not require qualification.</p> <p>GRO was detected in the laboratory blank for Method 8015D batch R86565 at a concentration of 0.042 mg/L. GRO results in the associated samples that were less than the laboratory reporting limit were assigned U qualifiers. GRO results greater than the laboratory reporting limit but less than 10 times the blank concentration were qualified assigned JB qualifiers. GRO results greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|--------------------|--------------|----------------------------|
| 200.7 | Dissolved Metals | C86413 | EB-3-8-22 |
| 200.8 | Total Metals | 66151 | Not Prepared |
| 200.8 | Total Metals | 66191 | EB-3-8-22, OW-50 |
| 200.8 | Dissolved Antimony | A86624 | Not Prepared |
| 200.8 | Dissolved Metals | B86418 | Not Prepared |
| 200.8 | Dissolved Metals | B86537 | EB-3-8-22, OW-52 |
| 200.8 | Dissolved Metals | B86600 | OW-10, DUP-3-8-22 |
| 200.8 | Dissolved Metals | C86418 | Not Prepared |
| 245.1 | Total Mercury | 66216 | OW-52 |
| 245.1 | Dissolved Mercury | 66259 | Not Prepared |
| 504.1 | EDB | 66148 | Not Prepared |
| 4500CN E | Cyanide | WG1831850 | Not Associated, EB-3-8-22 |
| 4500CN E | Cyanide | WG1832545 | Not Associated, DUP-3-8-22 |
| 8015D | TPH DRO and MRO | 66084 | Not Prepared |
| 8015D | GRO | R86565 | EB-3-8-22 |
| 8260B | VOC | B86433 | BW-5C |
| 8260B | MTBE | B86459 | Not Prepared |
| 8270C SIM | SVOC | 66057 | Not Prepared |
| 8270C | SVOC | 66091 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS/LCSD RPD | RPD QC Limits |
|----------|---------------------|-------|--------------|---------------|
| 8270 SIM | Naphthalene | 66057 | 40.0% | 25.6% |
| 8270 SIM | 1-Methylnaphthalene | 66057 | 38.9% | 25.0% |
| 8270 SIM | 2-Methylnaphthalene | 66057 | 37.7% | 25.0% |
| 8270 SIM | Acenaphthene | 66057 | 31.4% | 27.8% |

The identified analytes were not detected in the associated samples, and the results were assigned UJ qualifiers due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------------|------------|--------------------|------------|
| 8270C | 2-Fluorophenol | EB-3-8-22 | 29.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | EB-3-8-22 | 21.9% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | EB-3-8-22 | 36.8% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | EB-3-8-22 | 36.7% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | OW-50 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-50 | 1.7% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | OW-50 | 0.0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OW-50 | 11.5% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | OW-52 | 1.4% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-52 | 2.1% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | OW-52 | 2.0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OW-52 | 5.4% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | OW-29 | 2.1% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-29 | 6.9% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | OW-29 | 3.1% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OW-29 | 15.5% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | MKTF-43 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-43 | 2.1% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-43 | 2.3% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | MKTF-43 | 0.0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | MKTF-43 | 3.0% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | OW-10 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-10 | 1.3% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | OW-10 | 0.0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OW-10 | 3.4% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | DUP-3-8-22 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | DUP-3-8-22 | 2.0% | 28.5-64.7% |



VALIDATION CRITERIA CHECKLIST

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------------|------------|--------------------|------------|
| 8270C | Nitrobenzene-d ₅ | DUP-3-8-22 | 0.0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | DUP-3-8-22 | 8.3% | 38.1-99.9% |

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

The target analytes associated with surrogate recoveries that were less than the lower laboratory QC limits were not detected in the affected samples, and these results were qualified as UJ due to evidence of potential low bias.

The target analytes associated with surrogate recoveries that were less than 10% were qualified as R if not detected in the identified samples indicating rejected results, data not usable. For samples OW-50 and OW-29, two of three base/neutral extractable surrogates were recovered above 10%, and these undetected associated results were qualified as UJ.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-8-22, and one equipment blank sample, EB-3-8-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|-------------------------------|---------------|
| EB-3-8-22 | 8260B | Chloromethane | 0.47 µg/L |
| EB-3-8-22 | 8015D | Gasoline Range Organics (GRO) | 0.040 mg/L |
| EB-3-8-22 | 200.8 | Dissolved Chromium | 0.00027 mg/L |
| EB-3-8-22 | 245.1 | Dissolved Mercury | 0.00010 mg/L |
| EB-3-8-22 | 200.7 | Dissolved Zinc | 0.0054 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. The detection of dissolved zinc in the associated sample OW-29 that was greater than the reporting limit but less than 10 times the blank result was assigned a JB qualifier. Non-detections of the identified analytes in the associated samples did not require qualification.

The GRO results for the samples in batch R86565 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-3-8-22 was collected as a field duplicate of sample West BW-5C.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

An RPD value could not be calculated for dissolved nickel for the field duplicate pair BW-5C and DUP-3-8-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, dissolved nickel was qualified as J and UJ for the parent and duplicate samples, respectively.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate
Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1831850 | Not Associated |
| 4500CN E | Cyanide | WG1832545 | Not Associated, OW-10 |

The RPD for the laboratory duplicate prepared from a project sample could not be calculated because both measurements were reported as not detected.

The RPD values for laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic and acceptable?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? Yes

Comments: Target analytes were not reported by more than one method in this data set, with the following exception.

The target analyte 1,2-dibromoethane (EDB) was reported from analyses by both Method 8260B and Method 504.1. This analyte was reported as not detected by both methods. Qualification of data was not required.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The total metals concentrations were greater than or equal to the dissolved fractions, with the following exceptions.

| Sample ID | Analyte | Total Result | Dissolved Result | Reporting Limit | Units | RPD |
|-----------|----------|--------------|------------------|-----------------|-------|---------|
| EB-3-8-22 | Mercury | ND | 0.00010 | 0.00020 | mg/L | ----- ♦ |
| BW-5B | Mercury | ND | 0.00010 | 0.00020 | mg/L | ----- ♦ |
| OW-52 | Arsenic | 0.00075 | 0.00079 | 0.0010 | mg/L | ♦ |
| OW-52 | Barium | 0.035 | 0.043 | 0.0010 | mg/L | 20.5% |
| OW-10 | Barium | 0.049 | 0.051 | 0.0010 / 0.0050 | mg/L | 4.0% |
| MKTF-43 | Cadmium | ND | 0.0030 | 0.0050 / 0.010 | mg/L | ----- ♦ |
| EB-3-8-22 | Chromium | ND | 0.00027 | 0.0010 | mg/L | ----- ♦ |
| OW-50 | Chromium | ND | 0.00025 | 0.0010 | mg/L | ----- ♦ |
| MKTF-43 | Cobalt | 0.0021 | 0.023 | 0.010 / 0.030 | mg/L | ♦ |
| OW-10 | Cobalt | ND | 0.0032 | 0.0010 / 0.0060 | mg/L | ----- ♦ |
| BW-5B | Nickel | 0.0029 | 0.011 | 0.0010 | mg/L | ♦ |
| BW-5B | Selenium | 0.00076 | 0.0011 | 0.0010 | mg/L | ♦ |
| OW-52 | Vanadium | 0.0067 | 0.011 | 0.0010 / 0.050 | mg/L | ♦ |
| EB-3-8-22 | Zinc | ND | 0.0054 | 0.010 | mg/L | ----- ♦ |
| BW-5B | Zinc | ND | 0.0074 | 0.010 | mg/L | ----- ♦ |
| OW-50 | Zinc | ND | 0.0086 | 0.010 | mg/L | ----- ♦ |
| OW-52 | Zinc | ND | 0.0049 | 0.010 | mg/L | ----- ♦ |
| OW-29 | Zinc | ND | 0.010 | 0.010 | mg/L | ----- ♦ |
| MKTF-43 | Zinc | ND | 0.020 | 0.10 / 0.050 | mg/L | ----- ♦ |
| OW-10 | Zinc | ND | 0.0094 | 0.010 | mg/L | ----- ♦ |

----- RPD could not be calculated.

♦ = One or both of the detections were less than 5 times the applicable reporting limits, and qualification of data was not required.

The differences for the corresponding analytical results were within five times the applicable reporting limits, and validation action was not required, or the RPDs between the results were less than 30% indicating that the data were within the measurement uncertainty for the methods, and qualification of results was not required based on the analytical inconsistencies.

FIELD DUPLICATE SUMMARY

| Client Sample ID: BW-5C
Field Duplicate Sample ID: DUP-3-8-22 | | | | |
|--|---------------|--------------------|-------------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| 1,1-Dichloroethane | SW8260B | 0.82 µg/L | 0.81 µg/L | 1.2% +/-RL |
| 1,2-Dichloroethane | SW8260B | 0.68 µg/L | 0.67 µg/L | 1.5% +/-RL |
| MTBE | SW8260B | 24 µg/L | 25 µg/L | 4.1% |
| 1,4-Dioxane | SW8270C | 2.2 µg/L | 2.4 µg/L | 8.7% |
| TPH GRO | SW8015 | 0.062 mg/L | 0.060 mg/L | 3.3% +/-RL |
| TPH DRO | SW8015 | 0.069 mg/L | 0.071 mg/L | 2.9% +/-RL |
| Mercury, Dissolved | E245.1 | 0.00014 mg/L | 0.00012 mg/L | 15.4% +/-RL |
| Mercury, Total | E245.1 | 0.00042 mg/L | 0.00042 mg/L | 0.0% |
| Arsenic, Dissolved | E200.8 | 0.00043 mg/L | ND (0.0050 mg/L) | DL |
| Arsenic, Total | E200.8 | 0.0026 mg/L | 0.0025 mg/L | 3.9% |
| Barium, Dissolved | E200.8 | 0.11 mg/L | 0.12 mg/L | 8.7% |
| Barium, Total | E200.8 | 1.6 mg/L | 1.6 mg/L | 0.0% |
| Beryllium, Total | E200.8 | 0.0016 mg/L | 0.0022 mg/L | 31.6% +/-RL |
| Chromium, Dissolved | E200.8 | 0.00048 mg/L | 0.0015 mg/L | 103.0% +/-RL |
| Chromium, Total | E200.8 | 0.045 mg/L | 0.049 mg/L | 8.5% |
| Cobalt, Total | E200.8 | 0.011 mg/L | 0.012 mg/L | 8.7% |
| Lead, Total | E200.8 | 0.014 mg/L | 0.014 mg/L | 0.0% |
| Nickel, Dissolved | E200.8 | 0.0025 mg/L | ND (0.0050 mg/L) | DL |
| Nickel, Total | E200.8 | 0.033 mg/L | 0.035 mg/L | 5.9% |
| Selenium, Dissolved | E200.8 | 0.00045 mg/L | ND (0.0050 mg/L) | DL |
| Selenium, Total | E200.8 | 0.003 mg/L | 0.0027 mg/L | 10.5% |
| Silver, Total | E200.8 | 0.0003 mg/L | 0.00033 mg/L | 9.5% +/-RL |
| Vanadium, Total | E200.8 | 0.041 mg/L | 0.049 mg/L | 17.8% |
| Zinc, Total | E200.8 | 0.041 mg/L | 0.046 mg/L | 11.5% |
| Cobalt, Dissolved | E 200.7 | ND (0.0060 mg/L) | 0.0035 mg/L | DL |
| Zinc, Dissolved | E 200.7 | 0.0073 mg/L | 0.0069 mg/L | 5.6% +/-RL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

An RPD value could not be calculated for dissolved nickel for the field duplicate pair BW-5C and DUP-3-8-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, dissolved nickel was qualified as J and UJ for the parent and duplicate samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | BW-5C | 2203496-002a | 0.82 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | BW-5B | 2203496-003a | 0.54 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-10 | 2203496-008a | 0.73 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-3-8-22 | 2203496-009a | 0.81 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | OW-10 | 2203496-008a | 0.47 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | BW-5C | 2203496-002a | 0.68 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | BW-5B | 2203496-003a | 0.49 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-50 | 2203496-004a | 0.52 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-52 | 2203496-005a | 0.51 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-29 | 2203496-006a | 0.53 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-10 | 2203496-008a | 0.51 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-3-8-22 | 2203496-009a | 0.67 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 1,4-Dichlorobenzene | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 1,4-Dichlorobenzene | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 1,4-Dichlorobenzene | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dichlorobenzene | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dichlorobenzene | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dichlorobenzene | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dioxane | SW8270C | BW-5B | 2203496-003c | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-29 | 2203496-006c | 0.64 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | EB-3-8-22 | 2203496-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-5C | 2203496-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-5B | 2203496-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-50 | 2203496-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-52 | 2203496-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-29 | 2203496-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-43 | 2203496-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-10 | 2203496-008c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-3-8-22 | 2203496-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2,4,6-Trichlorophenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 2,4-Dimethylphenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 2-Methylnaphthalene | SW8270C | EB-3-8-22 | 2203496-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-5C | 2203496-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-5B | 2203496-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-50 | 2203496-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-52 | 2203496-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-29 | 2203496-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-43 | 2203496-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-10 | 2203496-008c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-3-8-22 | 2203496-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| 2-Methylphenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 3,4-Methylphenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| Acenaphthene | SW8270C | EB-3-8-22 | 2203496-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-5C | 2203496-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-5B | 2203496-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-50 | 2203496-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-52 | 2203496-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-29 | 2203496-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-43 | 2203496-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-10 | 2203496-008c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-3-8-22 | 2203496-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Acetone | SW8260B | OW-29 | 2203496-006a | 3.0 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5C | 2203496-002E | 0.00043 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5B | 2203496-003E | 0.00079 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-52 | 2203496-005E | 0.00079 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-29 | 2203496-006E | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-5B | 2203496-003D | 0.00096 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-52 | 2203496-005D | 0.00075 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-29 | 2203496-006D | 0.00076 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-43 | 2203496-007D | 0.0028 | 0.010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-10 | 2203496-008D | 0.00065 | 0.0010 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | OW-52 | 2203496-005C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | MKTF-43 | 2203496-007C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-10 | 2203496-008C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 20 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Benzoic Acid | SW8270C | EB-3-8-22 | 2203496-001C | ND | 20 | µg/L | UJ | LR-SUR |
| Benzoic Acid | SW8270C | OW-50 | 2203496-004C | ND | 20 | µg/L | UJ | LR-SUR |
| Benzoic Acid | SW8270C | OW-29 | 2203496-006C | ND | 20 | µg/L | UJ | LR-SUR |
| Beryllium, Total | E200.8 | DUP-3-8-22 | 2203496-009D | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-52 | 2203496-005C | ND | 10 | µg/L | R | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | MKTF-43 | 2203496-007C | ND | 10 | µg/L | R | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-10 | 2203496-008C | ND | 10 | µg/L | R | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 10 | µg/L | R | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | EB-3-8-22 | 2203496-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-50 | 2203496-004C | ND | 10 | µg/L | UJ | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-29 | 2203496-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Cadmium, Dissolved | E200.8 | MKTF-43 | 2203496-007E | 0.0030 | 0.010 | mg/L | J | MDLRL |
| Chloromethane | SW8260B | EB-3-8-22 | 2203496-001a | 0.47 | 3.0 | µg/L | J | MDLRL |
| Chromium, Dissolved | E200.8 | BW-5C | 2203496-002E | 0.00048 | 0.0010 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | BW-5B | 2203496-003E | 0.00069 | 0.0010 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | OW-50 | 2203496-004E | 0.00025 | 0.0010 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | OW-52 | 2203496-005E | 0.00041 | 0.0010 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | OW-29 | 2203496-006E | 0.00048 | 0.0010 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | DUP-3-8-22 | 2203496-009E | 0.0015 | 0.0050 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | EB-3-8-22 | 2203496-001E | 0.00027 | 0.0010 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-43 | 2203496-007E | 0.023 | 0.030 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-10 | 2203496-008E | 0.0032 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | DUP-3-8-22 | 2203496-009E | 0.0035 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | BW-5B | 2203496-003D | 0.00021 | 0.0010 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | OW-52 | 2203496-005D | 0.00048 | 0.0010 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | OW-29 | 2203496-006D | 0.00089 | 0.0010 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | MKTF-43 | 2203496-007D | 0.0021 | 0.010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Cyanide, Total | E335.4 | OW-50 | 2203496-004F | 3.29 | 5.00 | µg/L | J | MDLRL |
| Diethylphthalate | SW8270C | OW-52 | 2203496-005C | ND | 10 | µg/L | R | LR-SUR |
| Diethylphthalate | SW8270C | MKTF-43 | 2203496-007C | ND | 10 | µg/L | R | LR-SUR |
| Diethylphthalate | SW8270C | OW-10 | 2203496-008C | ND | 10 | µg/L | R | LR-SUR |
| Diethylphthalate | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 10 | µg/L | R | LR-SUR |
| Diethylphthalate | SW8270C | EB-3-8-22 | 2203496-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Diethylphthalate | SW8270C | OW-50 | 2203496-004C | ND | 10 | µg/L | UJ | LR-SUR |
| Diethylphthalate | SW8270C | OW-29 | 2203496-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | OW-52 | 2203496-005C | ND | 10 | µg/L | R | LR-SUR |
| Dimethylphthalate | SW8270C | MKTF-43 | 2203496-007C | ND | 10 | µg/L | R | LR-SUR |
| Dimethylphthalate | SW8270C | OW-10 | 2203496-008C | ND | 10 | µg/L | R | LR-SUR |
| Dimethylphthalate | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 10 | µg/L | R | LR-SUR |
| Dimethylphthalate | SW8270C | EB-3-8-22 | 2203496-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | OW-50 | 2203496-004C | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | OW-29 | 2203496-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | OW-52 | 2203496-005C | ND | 10 | µg/L | R | LR-SUR |
| Di-n-butylphthalate | SW8270C | MKTF-43 | 2203496-007C | ND | 10 | µg/L | R | LR-SUR |
| Di-n-butylphthalate | SW8270C | OW-10 | 2203496-008C | ND | 10 | µg/L | R | LR-SUR |
| Di-n-butylphthalate | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 10 | µg/L | R | LR-SUR |
| Di-n-butylphthalate | SW8270C | EB-3-8-22 | 2203496-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | OW-50 | 2203496-004C | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | OW-29 | 2203496-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-octylphthalate | SW8270C | OW-52 | 2203496-005C | ND | 20 | µg/L | R | LR-SUR |
| Di-n-octylphthalate | SW8270C | MKTF-43 | 2203496-007C | ND | 20 | µg/L | R | LR-SUR |
| Di-n-octylphthalate | SW8270C | OW-10 | 2203496-008C | ND | 20 | µg/L | R | LR-SUR |
| Di-n-octylphthalate | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 20 | µg/L | R | LR-SUR |
| Di-n-octylphthalate | SW8270C | EB-3-8-22 | 2203496-001C | ND | 20 | µg/L | UJ | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Di-n-octylphthalate | SW8270C | OW-50 | 2203496-004C | ND | 20 | µg/L | UJ | LR-SUR |
| Di-n-octylphthalate | SW8270C | OW-29 | 2203496-006C | ND | 20 | µg/L | UJ | LR-SUR |
| Lead, Dissolved | E200.8 | BW-5B | 2203496-003E | 0.00010 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | BW-5B | 2203496-003D | 0.00015 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-52 | 2203496-005D | 0.00023 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-29 | 2203496-006D | 0.00028 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-43 | 2203496-007D | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-10 | 2203496-008D | 0.00011 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | BW-5C | 2203496-002E | 0.00014 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | BW-5B | 2203496-003E | 0.00010 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | DUP-3-8-22 | 2203496-009E | 0.00012 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-3-8-22 | 2203496-001E | 0.00010 | 0.00020 | mg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-43 | 2203496-007a | 0.51 | 1.0 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | EB-3-8-22 | 2203496-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-5C | 2203496-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-5B | 2203496-003c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-50 | 2203496-004c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-52 | 2203496-005c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-29 | 2203496-006c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-43 | 2203496-007c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-10 | 2203496-008c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-3-8-22 | 2203496-009c | ND | 0.10 | µg/L | UJ | ERPD-LCS |
| Nickel, Dissolved | E200.8 | BW-5C | 2203496-002E | 0.0025 | 0.0010 | mg/L | J | ERPD-FD |
| Nickel, Dissolved | E200.8 | DUP-3-8-22 | 2203496-009E | ND | 0.0050 | mg/L | UJ | ERPD-FD |
| Nickel, Dissolved | E200.8 | OW-52 | 2203496-005E | 0.00057 | 0.0010 | mg/L | J | MDLRL |
| Nickel, Total | E200.8 | OW-52 | 2203496-005D | 0.00092 | 0.0010 | mg/L | J | MDLRL |
| Nickel, Total | E200.8 | MKTF-43 | 2203496-007D | 0.0082 | 0.010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Phenol | SW8270C | OW-50 | 2203496-004C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-52 | 2203496-005C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-29 | 2203496-006C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | MKTF-43 | 2203496-007C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-10 | 2203496-008C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | EB-3-8-22 | 2203496-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| Pyridine | SW8270C | OW-52 | 2203496-005C | ND | 10 | µg/L | R | LR-SUR |
| Pyridine | SW8270C | MKTF-43 | 2203496-007C | ND | 10 | µg/L | R | LR-SUR |
| Pyridine | SW8270C | OW-10 | 2203496-008C | ND | 10 | µg/L | R | LR-SUR |
| Pyridine | SW8270C | DUP-3-8-22 | 2203496-009C | ND | 10 | µg/L | R | LR-SUR |
| Pyridine | SW8270C | EB-3-8-22 | 2203496-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Pyridine | SW8270C | OW-50 | 2203496-004C | ND | 10 | µg/L | UJ | LR-SUR |
| Pyridine | SW8270C | OW-29 | 2203496-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Selenium, Dissolved | E200.8 | BW-5C | 2203496-002E | 0.00045 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | BW-5B | 2203496-003D | 0.00076 | 0.0010 | mg/L | J | MDLRL |
| Silver, Total | E200.8 | BW-5C | 2203496-002D | 0.00030 | 0.00050 | mg/L | J | MDLRL |
| Silver, Total | E200.8 | DUP-3-8-22 | 2203496-009D | 0.00033 | 0.00050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | BW-5C | 2203496-002C | 0.069 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-43 | 2203496-007C | 0.13 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | OW-10 | 2203496-008C | 0.080 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | DUP-3-8-22 | 2203496-009C | 0.071 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | BW-5B | 2203496-003C | 0.031 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-50 | 2203496-004C | 0.030 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-52 | 2203496-005C | 0.026 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | BW-5C | 2203496-002a | 0.062 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | BW-5B | 2203496-003a | 0.054 | 0.050 | mg/L | JB | MBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | OW-50 | 2203496-004a | 0.085 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | DUP-3-8-22 | 2203496-009a | 0.060 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | EB-3-8-22 | 2203496-001a | 0.040 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-52 | 2203496-005a | 0.049 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-43 | 2203496-007a | 0.039 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-10 | 2203496-008a | 0.042 | 0.050 | mg/L | U | MBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5B | 2203496-003E | 0.0084 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-52 | 2203496-005E | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-10 | 2203496-008E | 0.0051 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-29 | 2203496-006E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | BW-5C | 2203496-002E | 0.0073 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | BW-5B | 2203496-003E | 0.0074 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-50 | 2203496-004E | 0.0086 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-52 | 2203496-005E | 0.0049 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-43 | 2203496-007E | 0.020 | 0.050 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-10 | 2203496-008E | 0.0094 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-3-8-22 | 2203496-009E | 0.0069 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-3-8-22 | 2203496-001E | 0.0054 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, GW Sampling 2022 | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/09/2022 |
| Date Validated: 03/30/2022 | Sample End Date: 03/09/2022 |
| Parameters Included:
<ul style="list-style-type: none"> Total Suspended Solids (TSS) by Standard Methods for the Examination of Water and Wastewater (SM) Method 2540D | |
| Laboratory Project ID: 2203571 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- Laboratory control samples (LCS)

Method compliance was established by reviewing sample integrity, holding times, detection limits, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| MKTF-41 | 2203571-001 |
| MKTF-32 | 2203571-002 |
| MKTF-34 | 2203571-003 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ⊗ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ✓ Laboratory Blanks (Items 11 and 12)
- Matrix Spikes (MS) and Matrix Spike Duplicates (MSD) (Items 13 and 14)
- ✓ LCS (Items 15 and 16)
- System Monitoring Compounds (i.e., Surrogates) (Item 17)
- Field, Equipment, and Trip Blanks (Items 18 and 19)
- Field Duplicates (Items 20 and 21)
- Laboratory Duplicates (Item 22)
- Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Trihydro Data Validation Variance Documentation, February 2021.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|---------------------------|
| J | Estimated concentration |
| UJ | Estimated reporting limit |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 3 data points. The data completeness measure for this data package is calculated to be 100% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | Yes |
| Comments: The laboratory did not identify non-conformances regarding the analytical data. | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | Yes |
| Comments: The laboratory did not apply qualification flags or other notes to the data in the laboratory report. | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times. | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| Comments: The reporting limits for the analyses were reviewed and appeared to be acceptable. Dilutions were not applied for the analyses of the submitted samples. | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | Yes |
| Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC. | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.9°C and 3.5°C as noted on the CoC and the <i>Sample Log-in Check List</i> . The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen. | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | No |
| Comments: The samples were not analyzed within method-specific holding times.
Method 2540D: The submitted samples were analyzed outside the defined holding time of 7 days by approximately 1 day. Detected results for samples MKTF-32 and MKTF-34 by Method 2540D were assigned J qualifiers based on the holding time exceedances. The non-detect result for sample MKTF-41 was assigned a UJ qualifier based on the holding time exceedance. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |



| VALIDATION CRITERIA CHECKLIST | | |
|---|-----|--|
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | Yes | |
| Comments: Target analytes were reported as not detected in the laboratory blanks. | | |
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | No | |
| Comments: The total number of matrix spike samples prepared was not equal to at least 5% of the total number of samples. Matrix spikes were not prepared for the analyses in this data set. | | |
| 14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? | N/A | |
| Comments: MS/MSD samples were not prepared using project samples as the sample source. | | |
| 15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | |
| Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples. | | |
| 16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? | Yes | |
| Comments: The LCS percent recoveries were within laboratory QC limits. LCSDs were not analyzed as part of this sample set. | | |
| 17. Were surrogate recoveries within laboratory QC limits? | N/A | |
| Comments: Surrogates were not required for the analyses included in this data set. | | |
| 18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No | |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | | |
| 19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? | N/A | |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | | |
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No | |
| Comments: Field duplicates were not collected as part of this sample set. | | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | N/A | |
| Comments: Field duplicates were not collected as part of this sample set. | | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? | N/A | |
| Comments: Laboratory duplicate samples were not prepared for this sample set. | | |



| VALIDATION CRITERIA CHECKLIST | | |
|---|--|-----|
| 23. Were the following data relationships realistic and acceptable? | | |
| <ul style="list-style-type: none">Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? | | N/A |
| Comments: Target analytes were not reported by more than one method. | | |
| <ul style="list-style-type: none">Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? | | N/A |
| Comments: Total and dissolved metals analyses were not performed for this data set. | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| HT-AN | Sample was analyzed outside of the method holding time. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------------|-----------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Solids, Total Suspended | SM 2540 D | MKTF-32 | 2203571-002A | 91 | 4.0 | mg/L | J | HT-AN |
| Solids, Total Suspended | SM 2540 D | MKTF-34 | 2203571-003A | 27 | 4.0 | mg/L | J | HT-AN |
| Solids, Total Suspended | SM 2540 D | MKTF-41 | 2203571-001A | ND | 4.0 | mg/L | UJ | HT-AN |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/09/2022 |
| Date Validated: 04/04/2022 revised 11/16/2022 | Sample End Date: 03/09/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203574 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist and Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| MKTF-42 | 2203574-001 |
| MKTF-41 | 2203574-002 |
| MKTF-32 | 2203574-003 |
| MKTF-34 | 2203574-004 |
| PW-3 | 2203574-005 |
| PW-4 | 2203574-006 |
| DUP-3-9-22 | 2203574-007 |
| EB-3-9-22 | 2203574-008 |
| FB 3-9-22 | 2203574-009 |
| Trip Blank | 2203574-010 |

This data validation report was revised to incorporate data from a re-issued laboratory report with changes in analytes, results, and quality control information.





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)
- ✓ Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, February 2021.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| JB | Estimated concentration due to blank contamination |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 637 data points. The data completeness calculation does not include any submitted blank sample results. Six data points were rejected. The data completeness measure for this data package is calculated to be 99.06% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270: "S" flagged surrogates are due to sample dilution and/or matrix interferences.

Method 8015D: "S" flagged surrogates are due to sample dilution and/or matrix interferences.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits

J – The identification of the analyte is acceptable; the reported value is an estimate.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – % RPD is outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|----------|------------------------------|-----------------------------------|-----------------|
| 8015 | MKTF-32, DUP-3-9-22 | GRO | 2 |
| 8260B | MKTF-32, DUP-3-9-22 | VOCs | 2 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 504.1 | Multiple Samples | EDB | 10 |
| 8270C | MKTF-42, DUP-3-9-22 | SVOCs | 10 |
| 8270 SIM | MKTF-42 | 1,4-Dioxane | 20 |
| 8015D | MKTF-42, DUP-3-9-22 | DRO and MRO | 20 |
| 8260B | MKTF-32 | MTBE | 20 |
| 8270 SIM | MKTF-42, MKTF-41, DUP-3-9-22 | SVOCs | 20 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.9°C and 3.5°C as noted on the CoC and the *Sample Log-in Check List*. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

Samples transferred to Pace National were assumed to be received within the recommended temperature range, since results to the contrary were not reported.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|-----------------------------|--------|-----------------------|
| 8260B | Chloromethane | R86565 | 0.65 $\mu\text{g/L}$ |
| 8260B | Trichloroethene | R86565 | 0.24 $\mu\text{g/L}$ |
| 8015D | GRO | R86565 | 0.042 mg/L |
| 8015D | DRO | 66129 | 0.026 mg/L |
| 245.1 | Dissolved and Total Mercury | 66260 | 0.00012 mg/L |

Detections of the identified analytes in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Dissolved Metals | C86413 | EB-3-9-22 |
| 200.8 | Total Metals | 66151 | Not Prepared |
| 200.8 | Total Metals | 66191 | Not Prepared |
| 200.8 | Dissolved Metals | A86537 | Not Prepared |
| 200.8 | Dissolved Metals | A86624 | Not Prepared |
| 200.8 | Dissolved Metals | B86600 | Not Prepared |
| 245.1 | Dissolved and Total Mercury | 66259 | MKTF-41 |
| 245.1 | Dissolved and Total Mercury | 66260 | EB-3-9-22 |
| 504.1 | EDB | 66232 | Not Prepared |
| 4500CN E | Cyanide | WG1832548 | Not Associated, PW-4 |
| 8015D | TPH DRO and MRO | 66129 | Not Prepared |
| 8015D | GRO | R86565 | Not Prepared |
| 8260B | VOCs | R86565 | MKTF-42 |
| 8270C | SVOCs | 66111 | Not Prepared |
| 8270C SIM | SVOCs | 66214 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|--------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 8270C | 1,4-Dichlorobenzene | 66111 | Acceptable | Acceptable | 15.0-87.6% | 32.0% | 30.4% |
| 8270C | Phenol | 66111 | Acceptable | Acceptable | 16.8-70.5% | 38.9% | 37.2% |
| 200.8 | Dissolved Selenium | A86537 | 69.2% | ----- | 70-130% | ----- | ----- |
| 245.1 | Mercury | 66259 | 143% | ----- | 70-130% | ----- | ----- |
| 245.1 | Mercury | 66260 | 140% | ----- | 70-130% | ----- | ----- |

1,4-Dichlorobenzene and phenol were not detected in the associated samples in Method 8270C batch 66111, and these results were assigned UJ qualifiers due to evidence of poor precision.

Dissolved selenium was not detected in the associated sample EB-3-9-22, and this result was qualified as UJ due to potential low bias.

Detections of mercury in the associated samples in Method 245.1 batches 66259 and 66260 were assigned J+ qualifiers due to evidence of potential high bias. The non-detect results for mercury in these batches did not require qualification based on these non-conformances.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|---------|--------------------|------------|
| 8270C | 2-Fluorophenol | MKTF-34 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-34 | 5.8% | 28.5-64.7% |

Since Method 8270 surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples MKTF-41, MKTF-32, PW-3, and PW-4, and qualification of sample data was not required.

The acid fraction target analytes associated with the identified surrogate recoveries were not detected in sample MKTF-34. Since the surrogate recoveries were less than 10%, the results for the acid extractables were qualified as R indicating rejected results, data not usable, due to evidence of extreme low bias.

The DRO and MRO results for samples MKTF-42 and DUP-3-9-22 were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilutions of 20 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

The SVOC results for samples MKTF-42 and DUP-3-9-22 were not qualified based on the surrogate non-conformances in the Method 8270C analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

The SVOC results for samples MKTF-42, MKTF-41, and DUP-3-9-22 were not qualified based on the surrogate non-conformances in the Method 8270 SIM analyses since the applied dilutions of 20 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-9-22, and one equipment blank sample, EB-3-9-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.70 µg/L |
| Trip Blank | 8260B | Methylene Chloride | 0.51 µg/L |
| FB-3-9-22 | 8260B | Acetone | 3.1 µg/L |
| FB-3-9-22 | 8260B | Chloromethane | 0.68 µg/L |
| FB-3-9-22 | 8260B | Methylene Chloride | 4.0 µg/L |
| EB-3-9-22 | 8260B | 1,2-Dichloroethane | 0.41 µg/L |
| EB-3-9-22 | 8260B | Chloromethane | 0.66 µg/L |
| EB-3-9-22 | 8015D | GRO | 0.039 mg/L |
| EB-3-9-22 | 8015D | DRO | 0.022 mg/L |
| EB-3-9-22 | 200.7 | Dissolved Zinc | 0.0045 mg/L |
| EB-3-9-22 | 200.8 | Dissolved Chromium | 0.00020 mg/L |
| EB-3-9-22 | 245.1 | Dissolved Mercury | 0.000095 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than or equal to the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane, dissolved mercury, DRO, and GRO results for the samples in batches R86565, 66260, 66129, and R86565, respectively, were previously qualified due to laboratory method blank detections; therefore, additional qualification due to the trip, field, and equipment blank detections was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-3-9-22 was collected as a field duplicate of sample MKTF-42.

| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | No |
| <p>Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.</p> <p>The RPD values for multiple analytes exceeded the data validation limit of 30%, which was evidence of poor precision. These analyte results were qualified as J for samples MKTF-42 and DUP-3-9-22.</p> <p>An RPD value could not be calculated for total chromium for the field duplicate pair MKTF-42 and DUP-3-9-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, total chromium was qualified as J and UJ for the parent and duplicate samples, respectively.</p> | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? | Yes |
| <p>Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1832548 from sample MKTF-32 and from a sample not associated with this data set.</p> <p>The RPD for the laboratory duplicate prepared from a project sample was within laboratory acceptance limits.</p> <p>The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.</p> | |



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic and acceptable?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? Yes

Comments: Target analytes were not reported by more than one method in this data set, with the following exception.

The target analyte 1,2-dibromoethane (EDB) was reported from analyses by both Method 8260B and Method 504.1. This analyte was reported as not detected by both methods, or the results were less than the applicable RLs for the comparable analyses, or one or both results were within 5 times the applicable reporting limit. Validation action was not required.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The total metals concentrations were greater than or equal to the dissolved fractions, with the following exceptions.

| Sample ID | Analyte | Total Result | Dissolved Result | Reporting Limit | Units | RPD |
|------------|----------|--------------|------------------|-----------------|-------|---------|
| MKTF-41 | Mercury | 0.00011 | 0.00016 | 0.00020 | mg/L | ♦ |
| PW-3 | Mercury | ND | 0.000093 | 0.00020 | mg/L | ----- ♦ |
| EB-3-9-22 | Mercury | ND | 0.000095 | 0.00020 | mg/L | ----- ♦ |
| MKTF-41 | Arsenic | 0.0021 | 0.0023 | 0.0010 | mg/L | ♦ |
| MKTF-41 | Barium | 0.063 | 0.066 | 0.0050 | mg/L | 4.7% |
| MKTF-34 | Barium | 0.17 | 0.18 | 0.0050 | mg/L | 5.7% |
| PW-3 | Barium | 0.011 | 0.013 | 0.0010 / 0.0050 | mg/L | ♦ |
| EB-3-9-22 | Chromium | ND | 0.00020 | 0.0010 | mg/L | ----- ♦ |
| MKTF-34 | Cobalt | 0.0077 | 0.0080 | 0.0010 / 0.0060 | mg/L | ♦ |
| PW-3 | Cobalt | ND | 0.0032 | 0.0010 / 0.0060 | mg/L | ----- ♦ |
| PW-4 | Cobalt | ND | 0.0025 | 0.0010 / 0.0060 | mg/L | ----- ♦ |
| MKTF-42 | Zinc | ND | 0.011 | 0.010 | mg/L | ----- ♦ |
| MKTF-41 | Zinc | ND | 0.0097 | 0.010 | mg/L | ----- ♦ |
| MKTF-34 | Zinc | 0.0086 | 0.013 | 0.010 | mg/L | ♦ |
| PW-3 | Zinc | 0.0080 | 0.012 | 0.010 | mg/L | ♦ |
| PW-4 | Zinc | 0.014 | 0.022 | 0.010 | mg/L | ♦ |
| DUP-3-9-22 | Zinc | ND | 0.013 | 0.010 | mg/L | ----- ♦ |
| EB-3-9-22 | Zinc | ND | 0.0045 | 0.010 | mg/L | ----- ♦ |

----- RPD could not be calculated.

♦ = One or both of the detections were less than 5 times the applicable reporting limits, and qualification of data was not required.

The differences for the corresponding analytical results were within five times the applicable reporting limits, and validation action was not required, or the RPDs between the results were less than 30% indicating that the data were within the measurement uncertainty for the methods, and qualification of results was not required based on the analytical inconsistencies.

FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-42
Field Duplicate Sample ID: DUP-3-9-22 | | | | |
|--|----------------|--------------------|-------------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Vanadium, Dissolved | E 200.7 | 0.058 mg/L | 0.056 mg/L | 3.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | 0.013 mg/L | 16.7% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0023 mg/L | 0.0021 mg/L | 9.1% |
| Arsenic, Total | E200.8 | 0.0024 mg/L | 0.0026 mg/L | 8.0% |
| Barium, Dissolved | E200.8 | 0.054 mg/L | 0.053 mg/L | 1.9% |
| Barium, Total | E200.8 | 0.059 mg/L | 0.059 mg/L | 0.0% |
| Chromium, Dissolved | E200.8 | 0.00030 mg/L | ND (0.0050 mg/L) | DL |
| Chromium, Total | E200.8 | 0.0096 mg/L | ND (0.0010 mg/L) | DL |
| Cobalt, Total | E200.8 | 0.00028 mg/L | 0.00021 mg/L | 28.6% +/-RL |
| Lead, Total | E200.8 | 0.00025 mg/L | 0.00019 mg/L | 27.3% +/-RL |
| Nickel, Total | E200.8 | 0.00063 mg/L | ND (0.0010 mg/L) | DL |
| Selenium, Dissolved | E200.8 | 0.00083 mg/L | ND (0.0050 mg/L) | DL |
| Selenium, Total | E200.8 | 0.00099 mg/L | 0.00097 mg/L | 2.0% +/-RL |
| Vanadium, Total | E200.8 | 0.060 mg/L | 0.062 mg/L | 3.3% |
| Mercury, Dissolved | E245.1 | 0.000092 mg/L | ND (0.00020 mg/L) | DL |
| Mercury, Total | E245.1 | 0.000092 mg/L | 0.000095 mg/L | 3.2% +/-RL |
| Cyanide, Total | E335.4 | 6.93 µg/L | 3.89 µg/L | 56.2% +/-RL |
| 1,2-Dibromoethane | E504.1 | 0.12 µg/L | 0.074 µg/L | 47.4% +/-RL |
| TPH DRO | SW8015 | 23 mg/L | 21 mg/L | 9.1% |
| TPH GRO | SW8015 | 0.21 mg/L | 0.47 µg/L | 76.5% |
| 1,1-Dichloroethane | SW8260B | 0.68 µg/L | 1.4 µg/L | 69.2% +/-RL |
| 1,1-Dichloroethene | SW8260B | 1.1 µg/L | 2.6 µg/L | 81.1% +/-RL |
| 1,2,4-Trimethylbenzene | SW8260B | 6.3 µg/L | 13 µg/L | 69.4% |
| 1,2-Dichloroethane | SW8260B | 1.3 µg/L | 2.6 µg/L | 66.7% +/-RL |
| 1,3,5-Trimethylbenzene | SW8260B | 2.1 µg/L | 4.6 µg/L | 74.6% |
| Benzene | SW8260B | 9.5 µg/L | 21 µg/L | 75.4% |
| Chloromethane | SW8260B | 0.68 µg/L | 1.3 µg/L | 62.6% +/-RL |
| Ethylbenzene | SW8260B | 1.2 µg/L | 2.7 µg/L | 76.9% +/-RL |
| Isopropylbenzene | SW8260B | 1.5 µg/L | 3.3 µg/L | 75.0% +/-RL |
| MTBE | SW8260B | 1.2 µg/L | 2.5 µg/L | 70.3% +/-RL |
| n-Butylbenzene | SW8260B | 0.46 µg/L | 1.2 µg/L | 89.2% +/-RL |
| n-Propylbenzene | SW8260B | 1.6 µg/L | 3.5 µg/L | 74.5% +/-RL |
| p-Isopropyltoluene | SW8260B | 0.37 µg/L | 0.84 µg/L | 77.7% +/-RL |
| sec-Butylbenzene | SW8260B | 0.38 µg/L | 0.85 µg/L | 76.4% +/-RL |
| Toluene | SW8260B | 0.43 µg/L | 1.2 µg/L | 94.5% +/-RL |
| Vinyl Chloride | SW8260B | ND (1.0 µg/L) | 0.87 µg/L | DL |
| Xylenes, Total | SW8260B | 26 µg/L | 56 µg/L | 73.2% |
| Naphthalene | SW8270C | ND (2.0 µg/L) | 2.0 µg/L | DL |



Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD values for multiple analytes exceeded the data validation limit of 30%, which was evidence of poor precision. These analyte results were qualified as J for samples MKTF-42 and DUP-3-9-22.

An RPD value could not be calculated for total chromium for the field duplicate pair MKTF-42 and DUP-3-9-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, total chromium was qualified as J and UJ for the parent and duplicate samples, respectively.

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| TBD | Trip blank detection |
| FBD | Field blank detection |
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-42 | 2203574-001a | 0.68 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-34 | 2203574-004a | 0.55 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-3-9-22 | 2203574-007a | 1.4 | 2 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | MKTF-34 | 2203574-004a | 0.57 | 1 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | MKTF-42 | 2203574-001a | 6.3 | 1 | µg/L | J | ERPD-FD |
| 1,2,4-Trimethylbenzene | SW8260B | MKTF-34 | 2203574-004a | 0.4 | 1 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP-3-9-22 | 2203574-007a | 13 | 2 | µg/L | J | ERPD-FD |
| 1,2-Dibromoethane | E504.1 | DUP-3-9-22 | 2203574-007B | 0.074 | 0.093 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-42 | 2203574-001a | 1.3 | 1 | µg/L | JB | EBD |
| 1,2-Dichloroethane | SW8260B | MKTF-41 | 2203574-002a | 2.1 | 1 | µg/L | JB | EBD |
| 1,2-Dichloroethane | SW8260B | MKTF-34 | 2203574-004a | 0.54 | 1 | µg/L | U | EBD, MDLRL |
| 1,2-Dichloroethane | SW8260B | PW-4 | 2203574-006a | 0.42 | 1 | µg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| 1,2-Dichloroethane | SW8260B | DUP-3-9-22 | 2203574-007a | 2.6 | 2 | µg/L | JB | EBD |
| 1,2-Dichloroethane | SW8260B | EB-3-9-22 | 2203574-008a | 0.41 | 1 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | MKTF-42 | 2203574-001a | 2.1 | 1 | µg/L | J | ERPD-FD |
| 1,3,5-Trimethylbenzene | SW8260B | MKTF-41 | 2203574-002a | 0.91 | 1 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | DUP-3-9-22 | 2203574-007a | 4.6 | 2 | µg/L | J | ERPD-FD |
| 1,4-Dichlorobenzene | SW8270C | MKTF-42 | 2203574-001C | ND | 50 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-41 | 2203574-002C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-32 | 2203574-003C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | PW-3 | 2203574-005C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | PW-4 | 2203574-006C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | DUP-3-9-22 | 2203574-007C | ND | 50 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | EB-3-9-22 | 2203574-008C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | MKTF-34 | 2203574-004a | 6.8 | 10 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | LR-SUR |
| Acetone | SW8260B | MKTF-34 | 2203574-004a | 16 | 10 | µg/L | JB | FBD |
| Acetone | SW8260B | FB 3-9-22 | 2203574-009a | 3.1 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-34 | 2203574-004E | 0.002 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | PW-3 | 2203574-005E | 0.0037 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | PW-4 | 2203574-006E | 0.00094 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-3-9-22 | 2203574-007E | 0.0021 | 0.005 | mg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-42 | 2203574-001a | 9.5 | 1 | µg/L | J | ERPD-FD |
| Benzene | SW8260B | MKTF-41 | 2203574-002a | 0.35 | 1 | µg/L | J | MDLRL |
| Benzene | SW8260B | DUP-3-9-22 | 2203574-007a | 21 | 2 | µg/L | J | ERPD-FD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| Bis(2-ethylhexyl)phthalate | SW8270C | MKTF-34 | 2203574-004C | 6.2 | 10 | µg/L | J | MDLRL |
| Carbon Disulfide | SW8260B | PW-4 | 2203574-006a | 0.68 | 10 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | MKTF-42 | 2203574-001a | 0.68 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-41 | 2203574-002a | 0.67 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-32 | 2203574-003a | 1.3 | 6 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | PW-3 | 2203574-005a | 0.8 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | PW-4 | 2203574-006a | 0.71 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP-3-9-22 | 2203574-007a | 1.3 | 6 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | EB-3-9-22 | 2203574-008a | 0.66 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB 3-9-22 | 2203574-009a | 0.68 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203574-010a | 0.7 | 3 | µg/L | U | MBD, MDLRL |
| Chromium, Dissolved | E200.8 | MKTF-42 | 2203574-001E | 0.0003 | 0.001 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | MKTF-41 | 2203574-002E | 0.0013 | 0.001 | mg/L | JB | EBD |
| Chromium, Dissolved | E200.8 | MKTF-32 | 2203574-003E | 0.00023 | 0.001 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E200.8 | EB-3-9-22 | 2203574-008E | 0.0002 | 0.001 | mg/L | J | MDLRL |
| Chromium, Total | E200.8 | MKTF-42 | 2203574-001D | 0.0096 | 0.001 | mg/L | J | ERPD-FD |
| Chromium, Total | E200.8 | MKTF-34 | 2203574-004D | 0.00074 | 0.001 | mg/L | J | MDLRL |
| Chromium, Total | E200.8 | DUP-3-9-22 | 2203574-007D | ND | 0.001 | mg/L | UJ | ERPD-FD |
| Cobalt, Dissolved | E 200.7 | PW-3 | 2203574-005E | 0.0032 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | PW-4 | 2203574-006E | 0.0025 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | MKTF-42 | 2203574-001D | 0.00028 | 0.001 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | MKTF-32 | 2203574-003D | 0.00072 | 0.001 | mg/L | J | MDLRL |
| Cobalt, Total | E200.8 | DUP-3-9-22 | 2203574-007D | 0.00021 | 0.001 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-41 | 2203574-002F | 4.04 | 5 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-32 | 2203574-003F | 2.03 | 5 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | DUP-3-9-22 | 2203574-007F | 3.89 | 5 | µg/L | J | MDLRL |
| Ethylbenzene | SW8260B | MKTF-41 | 2203574-002a | 0.8 | 1 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-41 | 2203574-002a | 0.18 | 1 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|--------------------|
| Lead, Dissolved | E200.8 | MKTF-32 | 2203574-003E | 0.000095 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-34 | 2203574-004E | 0.0014 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-42 | 2203574-001D | 0.00025 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-41 | 2203574-002D | 0.000066 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-3-9-22 | 2203574-007D | 0.00019 | 0.0005 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-42 | 2203574-001E | 0.000092 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-41 | 2203574-002E | 0.00016 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-34 | 2203574-004E | 0.00023 | 0.0002 | mg/L | JB | HR-LCS, MBD |
| Mercury, Dissolved | E245.1 | PW-3 | 2203574-005E | 0.000093 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | PW-4 | 2203574-006E | 0.000093 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-3-9-22 | 2203574-008E | 0.000095 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | MKTF-42 | 2203574-001D | 0.000092 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | MKTF-41 | 2203574-002D | 0.00011 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | MKTF-32 | 2203574-003D | 0.000098 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | MKTF-34 | 2203574-004D | 0.00046 | 0.0002 | mg/L | JB | HR-LCS, MBD |
| Mercury, Total | E245.1 | PW-4 | 2203574-006D | 0.0001 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | DUP-3-9-22 | 2203574-007D | 0.000095 | 0.0002 | mg/L | U | HR-LCS, MBD, MDLRL |
| Methylene Chloride | SW8260B | MKTF-34 | 2203574-004a | 1.1 | 3 | µg/L | U | MDLRL, TBD |
| Methylene Chloride | SW8260B | PW-4 | 2203574-006a | 0.53 | 3 | µg/L | U | MDLRL, TBD |
| Methylene Chloride | SW8260B | FB 3-9-22 | 2203574-009a | 4 | 3 | µg/L | JB | TBD |
| Methylene Chloride | SW8260B | Trip Blank | 2203574-010a | 0.51 | 3 | µg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-41 | 2203574-002a | 0.56 | 1 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-42 | 2203574-001a | 0.46 | 3 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP-3-9-22 | 2203574-007a | 1.2 | 6 | µg/L | J | MDLRL |
| Nickel, Total | E200.8 | MKTF-42 | 2203574-001D | 0.00063 | 0.001 | mg/L | J | MDLRL |
| Nickel, Total | E200.8 | PW-3 | 2203574-005D | 0.00097 | 0.001 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-41 | 2203574-002a | 0.34 | 1 | µg/L | J | MDLRL |
| Phenol | SW8270C | MKTF-42 | 2203574-001C | ND | 50 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|------------------|
| Phenol | SW8270C | MKTF-41 | 2203574-002C | ND | 5 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-32 | 2203574-003C | ND | 5 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-34 | 2203574-004C | ND | 5 | µg/L | R | ERPD-LCS, LR-SUR |
| Phenol | SW8270C | PW-3 | 2203574-005C | ND | 5 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | PW-4 | 2203574-006C | ND | 5 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | DUP-3-9-22 | 2203574-007C | ND | 50 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | EB-3-9-22 | 2203574-008C | ND | 5 | µg/L | UJ | ERPD-LCS |
| p-Isopropyltoluene | SW8260B | MKTF-42 | 2203574-001a | 0.37 | 1 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | DUP-3-9-22 | 2203574-007a | 0.84 | 2 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-42 | 2203574-001a | 0.38 | 1 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-32 | 2203574-003a | 0.33 | 2 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | DUP-3-9-22 | 2203574-007a | 0.85 | 2 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-42 | 2203574-001E | 0.00083 | 0.001 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | EB-3-9-22 | 2203574-008E | ND | 0.001 | mg/L | UJ | LR-LCS |
| Selenium, Total | E200.8 | MKTF-42 | 2203574-001D | 0.00099 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-32 | 2203574-003D | 0.00041 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-34 | 2203574-004D | 0.00072 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-3-9-22 | 2203574-007D | 0.00097 | 0.001 | mg/L | J | MDLRL |
| Silver, Total | E200.8 | MKTF-34 | 2203574-004D | 0.00041 | 0.0005 | mg/L | J | MDLRL |
| Toluene | SW8260B | MKTF-42 | 2203574-001a | 0.43 | 1 | µg/L | J | MDLRL |
| Toluene | SW8260B | DUP-3-9-22 | 2203574-007a | 1.2 | 2 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-32 | 2203574-003C | 0.23 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-34 | 2203574-004C | 0.19 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | PW-3 | 2203574-005C | 0.03 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | PW-4 | 2203574-006C | 0.022 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | EB-3-9-22 | 2203574-008C | 0.022 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-42 | 2203574-001a | 0.21 | 0.05 | mg/L | JB | ERPD-FD, MBD |
| TPH GRO | SW8015 | MKTF-41 | 2203574-002a | 0.085 | 0.05 | mg/L | JB | MBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | PW-3 | 2203574-005a | 0.041 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | PW-4 | 2203574-006a | 0.042 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | DUP-3-9-22 | 2203574-007a | 0.47 | 0.1 | mg/L | J | ERPD-FD |
| TPH GRO | SW8015 | EB-3-9-22 | 2203574-008a | 0.039 | 0.05 | mg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | MKTF-41 | 2203574-002a | 0.35 | 1 | µg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | MKTF-32 | 2203574-003a | 0.52 | 2 | µg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | MKTF-34 | 2203574-004a | 0.69 | 1 | µg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | PW-4 | 2203574-006a | 0.22 | 1 | µg/L | U | MBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-41 | 2203574-002E | 0.03 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-32 | 2203574-003E | 0.0063 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | PW-3 | 2203574-005E | 0.0026 | 0.05 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | PW-4 | 2203574-006a | 0.46 | 1 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | DUP-3-9-22 | 2203574-007a | 0.87 | 2 | µg/L | J | MDLRL |
| Xylenes, Total | SW8260B | MKTF-42 | 2203574-001a | 26 | 1.5 | µg/L | J | ERPD-FD |
| Xylenes, Total | SW8260B | DUP-3-9-22 | 2203574-007a | 56 | 3 | µg/L | J | ERPD-FD |
| Zinc, Dissolved | E 200.7 | MKTF-42 | 2203574-001E | 0.011 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-41 | 2203574-002E | 0.0097 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-32 | 2203574-003E | 0.0046 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-34 | 2203574-004E | 0.013 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | PW-3 | 2203574-005E | 0.012 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | PW-4 | 2203574-006E | 0.022 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-3-9-22 | 2203574-007E | 0.013 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-3-9-22 | 2203574-008E | 0.0045 | 0.01 | mg/L | J | MDLRL |
| Zinc, Total | E200.8 | MKTF-32 | 2203574-003D | 0.0047 | 0.01 | mg/L | J | MDLRL |
| Zinc, Total | E200.8 | MKTF-34 | 2203574-004D | 0.0086 | 0.01 | mg/L | J | MDLRL |
| Zinc, Total | E200.8 | PW-3 | 2203574-005D | 0.008 | 0.01 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

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|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/10/2022 |
| Date Validated: 09/19/2022 | Sample End Date: 03/10/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Per- and Polyfluorinated Alkyl Substances (PFAS) by Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS) and Isotope Dilution (ID) | |
| Laboratory Project ID: 2203667 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, and from Vista Analytical Laboratory of El Dorado Hills, California, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample ID
Hall Environmental | Laboratory Sample ID
Pace | Laboratory Sample ID
Vista |
|------------------|--|------------------------------|-------------------------------|
| EB 3-10-22 | 2203667-001 | L1471288-01 | ----- |
| MKTF-46 | 2203667-002 | L1471288-02 | ----- |
| MKTF-35 | 2203667-003 | L1471288-03 | ----- |
| OW-57 | 2203667-004 | L1471288-04 | ----- |
| OW-58 | 2203667-005 | L1471288-05 | ----- |
| OW-58A | 2203667-006 | L1471288-06 | ----- |
| OW-63 | 2203667-007 | L1471288-07 | 2203119-01 |
| DUP 3-10-22 | 2203667-008 | L1471288-08 | ----- |
| FB 3-10-22 | 2203667-009 | ----- | ----- |
| PFAS-FB | 2203667-010 | ----- | 2203119-02 |
| Trip Blank | 2203667-011 | ----- | ----- |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Identified Issues (Item 1)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Data review and evaluation was performed following criteria set forth in Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537, document number EPA 910-R-18-001, November 2018.
- Data were reviewed and evaluated according to criteria set forth in the Department of Defense (DoD) / Department of Energy (DOE) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3, 2019.





Tier II Data Validation Report Summary

- Data were reviewed and evaluated according to criteria set forth in Data Validation Guidelines Module 3: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-15, United States Department of Defense, Environmental Data Quality Workgroup, May 2020.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| Qualifier | Definition |
|-----------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| JB | Estimated concentration due to blank contamination |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 654 data points. The data completeness calculation does not include any submitted blank sample results. One data points was rejected. The data completeness measure for this data package is calculated to be 99.85% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C SIM: A laboratory error on the spiking of the LCS/LCSD occurred. The LCS/LCSD for only the 8270 SIM compound was spiked with the inappropriate spike and the laboratory could not determine the LCS/LCSD concentrations for the samples in this batch (R86533). The surrogate recoveries were all acceptable for the 8270 SIM samples and all other method criteria were met. We have flagged all compounds with an "E" flag to represent the fact that the data for the 8270SIM test should be considered estimated. **The samples in Method 8270C SIM batch R86533 were assigned J qualifiers for detections and UJ for non-detections due to incomplete required quality control analyses.**

Method 8270C: "S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

E – Estimated value.

H – Recovery was outside laboratory acceptance criteria.

J – Analyte detected below quantitation limits.

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|-----------------------|----------------------------|-----------------|
| 200.7 | OW-57, OW-63, MKTF-35 | Total and Dissolved Barium | 5 |
| 200.8 | MKTF-35 | Select Total Metals | 5 |
| 245.1 | DUP 3-10-22, MKTF-35 | Total Mercury | 5 |
| 200.7 | OW-58, MKTF-35 | Total and Dissolved Barium | 10 |
| 504.1 | Multiple Samples | EDB | 10 |
| 8015 D | OW-58, OW-57, OW-58A | DRO and MRO | 10 |
| 8015D | MKTF-35 | GRO | 10 |
| 8260B | MKTF-35 | Select VOCs | 10 |
| 8015D | OW-58A | GRO | 20 |
| 8260B | OW-58A | Select VOCs | 20 |
| 8015D | OW-58, OW-57, OW-63 | GRO | 50 |



| VALIDATION CRITERIA CHECKLIST | | | | |
|-------------------------------|--------|---------------------|-------------|-----------------|
| | Method | Sample(s) | Analyte(s) | Dilution Factor |
| | 8260B | OW-58, OW-57, OW-63 | Select VOCs | 50 |
| | 8260B | MKTF-35 | Select VOCs | 100 |
| | 8260B | OW-58A | Benzene | 200 |
| | 8260B | OW-58, OW-57, OW-63 | Benzene | 500 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between -0.5°C to 5.3°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.7°C as noted on the CoC. Samples transferred to Vista were received in good condition with the cooler temperature outside the recommended range at 0.7°C as noted on the Sample Log-in Checklist. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of nanograms per liter (ng/L), micrograms per liter (µg/L), and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|---------------|--------|---------------|
| 8015D | DRO | 66129 | 0.026 mg/L |
| 8015D | DRO | 66219 | 0.018 mg/L |
| 8260B | Chloromethane | R86601 | 0.66 µg/L |
| 8260B | Chloromethane | R86626 | 0.68 µg/L |
| 8015D | GRO | R86601 | 0.044 mg/L |
| 8015D | GRO | G86626 | 0.034 mg/L |

Detections of DRO, GRO, and chloromethane in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of GRO in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were greater than the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-------------|-----------------------------|-----------|-------------------|
| 200.7 | Total Metals | 66641 | Not Prepared |
| 200.7 | Total Metals | 66642 | OW-57, OW-58 |
| 200.7 | Dissolved Metals | A86443 | Not Prepared |
| 200.7 | Dissolved Barium | A87332 | Not Prepared |
| 200.8 | Total Metals | 66191 | Not Prepared |
| 200.8 | Dissolved Metals | A86482 | EB 3-10-22 |
| 200.8 | Dissolved Lead | A86537 | MKTF-46 |
| 245.1 | Total and Dissolved Mercury | 66283 | DUP 3-10-22 |
| 504.1 | EDB | 66149 | Not Prepared |
| 504.1 | EDB | 66232 | Not Prepared |
| 4500CN E | Cyanide | WG1834196 | EB 3-10-22, OW-63 |
| 8015D | TPH DRO and MRO | 66129 | Not Prepared |
| 8015D | TPH DRO and MRO | 66219 | Not Prepared |
| 8015D | TPH GRO | G86626 | Not Prepared |
| 8015D | TPH GRO | R86601 | Not Prepared |
| 8260B | VOCs | R86601 | MKTF-46 |
| 8260B | VOCs | R86626 | Not Prepared |
| 8270C | SVOCs | 66142 | Not Prepared |
| 8270C SIM | 1,4-Dioxane | R86533 | Not Prepared |
| PFAS Method | PFAs | B22C148 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits or were not applicable because the unspiked amount was more than four times the spike added, with the following exceptions, with the following exceptions.

The MS recovery for cyanide in Method 4500 CN E batch WG1834196 was outside the QC limits of 75-125% at 74.2%. Cyanide results were qualified as J- if detected and UJ if not detected in the associated samples due to evidence of potential low bias.

Also, the MS/MSD RPD for cyanide Method 4500 CN E batch WG1834196 exceeded the QC limit of 20% at 28.4%. The associated sample results were qualified as J if detected or UJ if not detected due to evidence of poor precision.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|----------|--------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 66642 | 67.7% | ----- | 70-130% | ----- | ----- |
| 200.8 | Dissolved Antimony | A86482 | 67.8% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 66219 | 77.8% | Acceptable | 31.7-75.4% | Acceptable | 20% |
| 8270 SIM | Acenaphthene | R86533 | Acceptable | Acceptable | 29.8-82.7% | 40.5% | 27.8% |

The total nickel and dissolved antimony results were qualified as J- if detected and UJ if not detected in the associated samples due to evidence of potential low bias.

Detections of TPH DRO in the associated samples in batch 66219 were qualified as J+ due to evidence of potential high bias.

The acenaphthene results were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample MKTF-35, and qualification of sample data was not required.

The DRO and MRO results for samples OW-57, OW-58, and OW-58A were not qualified based on the surrogate non-conformances in the Method 8015D analysis since the applied dilutions of 10 times resulted in a surrogate concentrations below routinely calibrated levels, and this result was deemed unreliable and possibly inaccurate.

The PFAS Method extracted internal standard (EIS) $^{13}\text{C}_3$ -PFBA for sample OW-63 was recovered outside the data validation limits of 50-150% at 19.5%. The associated target analyte PFBA was not detected in sample OW-63, and this result was qualified as R due to evidence of extreme low bias (recovery less than 20%).



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, two field blank samples, FB 3-10-22 and PFAS-FB, and one equipment blank sample, EB 3-10-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|------------------|-----------------------|----------------------|
| Trip Blank | 8260B | Benzene | 0.29 µg/L |
| Trip Blank | 8260B | Chloromethane | 0.69 µg/L |
| Trip Blank | 8015D | TPH GRO | 0.034 mg/L |
| FB 3-10-22 | 8260B | Acetone | 4.5 µg/L |
| FB 3-10-22 | 8260B | Benzene | 0.37 µg/L |
| FB 3-10-22 | 8015D | TPH GRO | 0.040 mg/L |
| EB 3-10-22 | 8260B | 2-Butanone | 5.7 µg/L |
| EB 3-10-22 | 8260B | Chloromethane | 0.78 µg/L |
| EB 3-10-22 | 8015D | TPH GRO | 0.039 mg/L |
| EB 3-10-22 | 8015D | TPH DRO | 0.025 mg/L |
| EB 3-10-22 | 8270C SIM | Pyrene | 0.24 µg/L |
| EB 3-10-22 | 200.7 | Dissolved Zinc | 0.0070 mg/L |

Detections of benzene, pyrene, and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of pyrene and dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane (batches R86601 and R86626), TPH GRO (batches R86601 and R86626), and TPH DRO (batches 66129 and 66219) results were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the trip and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-10-22 was collected as a field duplicate of sample MKTF-46.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for naphthalene exceeded the data validation limit of 30% at 61.5%. The naphthalene results were qualified as J for samples MKTF-46 and DUP-3-10-22 due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1834196 | Not Associated |
| 4500CN E | Cyanide | WG1834196 | MKTF-35 |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for laboratory duplicates prepared from project samples were not applicable since the result for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-46 | Antimony | ND | 0.0015 |
| MKTF-35 | Antimony | ND | 0.00071 |
| OW-58A | Barium | 0.90 | 0.94 |
| OW-63 | Barium | 4.3 | 4.6 |
| OW-57 | Nickel | 0.055 | 0.057 |
| OW-58A | Nickel | 0.034 | 0.037 |
| OW-63 | Nickel | 0.025 | 0.027 |
| OW-63 | Vanadium | 0.0026 | 0.0027 |
| OW-58 | Zinc | ND | 0.0091 |
| OW-57 | Zinc | ND | 0.0080 |
| OW-58A | Zinc | ND | 0.015 |
| OW-63 | Zinc | ND | 0.015 |
| DUP 3-10-22 | Zinc | ND | 0.0081 |
| EB 3-10-22 | Zinc | ND | 0.0070 |
| MKTF-46 | Zinc | ND | 0.0099 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-46
Field Duplicate Sample ID: DUP-3-10-22 | | | | |
|---|----------------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| 1,2,4-Trimethylbenzene | SW8260B | 0.37 µg/L | 1.1 µg/L | 99.3% +/-RL |
| 1,3,5-Trimethylbenzene | SW8260B | ND (1.0 µg/L) | 0.21 µg/L | DL |
| Benzene | SW8260B | ND (1.0 µg/L) | 0.39 µg/L | DL |
| Chlorobenzene | SW8260B | 0.19 µg/L | 0.38 µg/L | 66.7% +/-RL |
| Chloromethane | SW8260B | 0.67 µg/L | 0.67 µg/L | 0.0% +/-RL |
| sec-Butylbenzene | SW8260B | 0.21 µg/L | 0.37 µg/L | 55.2% +/-RL |
| Xylenes, Total | SW8260B | 0.77 µg/L | 1.8 µg/L | 80.2% +/-RL |
| 1,4-Dioxane | SW8270C | 1.7 µg/L | 1.5 µg/L | 12.5% +/-RL |
| Naphthalene | SW8270C | 0.18 µg/L | 0.34 µg/L | 61.5% |
| TPH GRO | SW8015 | 0.061 mg/L | 0.066 mg/L | 7.9% +/-RL |
| TPH DRO | SW8015 | 0.042 mg/L | 0.046 mg/L | 9.1% +/-RL |
| Barium, Dissolved | E 200.7 | 0.030 mg/L | 0.032 mg/L | 6.5% |
| Barium, Total | E 200.7 | 0.079 mg/L | 0.069 mg/L | 13.5% |
| Cobalt, Dissolved | E 200.7 | 0.0029 mg/L | ND (0.0060 mg/L) | DL |
| Cobalt, Total | E 200.7 | 0.0041 mg/L | 0.0032 mg/L | 24.7% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0021 mg/L | ND (0.050 mg/L) | DL |
| Vanadium, Total | E 200.7 | 0.0047 mg/L | 0.0049 mg/L | 4.2% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0099 mg/L | 0.0081 mg/L | 20.0% +/-RL |
| Antimony, Dissolved | E200.8 | 0.0015 mg/L | ND (0.0010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00093 mg/L | 0.00096 mg/L | 3.2% +/-RL |
| Arsenic, Total | E200.8 | 0.0012 mg/L | 0.0012 mg/L | 0.0% +/-RL |
| Lead, Total | E200.8 | 0.0011 mg/L | 0.0010 mg/L | 9.5% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for naphthalene exceeded the data validation limit of 30% at 61.5%, which was evidence of poor precision. The naphthalene results were qualified as J for samples MKTF-46 and DUP-3-10-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| HZ-QAQC | Analysis of QA/QC samples was not performed at the required frequency. |
| MBD | Method blank detection |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| ERP-D-MS | The MS/MSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERP-D-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-EIS | The extracted internal standard (EIS) recovery was less than the lower acceptance limit. |
| EBD | Equipment blank detection |
| TBD | Trip blank detection |
| ERP-D-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-35 | 2203667-003a | 7.2 | 10 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-58A | 2203667-006a | 11 | 20 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-63 | 2203667-007a | 31 | 50 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | MKTF-46 | 2203667-002a | 0.37 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-57 | 2203667-004a | 6.5 | 50 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-58 | 2203667-005a | 12 | 50 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-57 | 2203667-004a | 21 | 50 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-58 | 2203667-005a | 21 | 50 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-58A | 2203667-006a | 8.9 | 20 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-63 | 2203667-007a | 21 | 50 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,3,5-Trimethylbenzene | SW8260B | DUP 3-10-22 | 2203667-008a | 0.21 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-46 | 2203667-002c | 1.7 | 1.0 | µg/L | J | HZ-QAQC |
| 1,4-Dioxane | SW8270C | MKTF-35 | 2203667-003C | 1.7 | 1.0 | µg/L | J | HZ-QAQC |
| 1,4-Dioxane | SW8270C | OW-58 | 2203667-005C | 1.3 | 1.0 | µg/L | J | HZ-QAQC |
| 1,4-Dioxane | SW8270C | OW-58A | 2203667-006C | 1.9 | 1.0 | µg/L | J | HZ-QAQC |
| 1,4-Dioxane | SW8270C | DUP 3-10-22 | 2203667-008c | 1.5 | 1.0 | µg/L | J | HZ-QAQC |
| 1,4-Dioxane | SW8270C | EB 3-10-22 | 2203667-001c | ND | 1.0 | µg/L | UJ | HZ-QAQC |
| 1,4-Dioxane | SW8270C | OW-57 | 2203667-004C | ND | 1.0 | µg/L | UJ | HZ-QAQC |
| 1,4-Dioxane | SW8270C | OW-63 | 2203667-007C | ND | 1.0 | µg/L | UJ | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | MKTF-35 | 2203667-003C | 9.1 | 0.10 | µg/L | J | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | OW-57 | 2203667-004C | 82 | 0.10 | µg/L | J | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | OW-58 | 2203667-005C | 74 | 0.10 | µg/L | J | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | OW-58A | 2203667-006C | 91 | 0.10 | µg/L | J | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | OW-63 | 2203667-007C | 65 | 0.10 | µg/L | J | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 1-Methylnaphthalene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 2-Butanone | SW8260B | EB 3-10-22 | 2203667-001a | 5.7 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | MKTF-35 | 2203667-003C | 13 | 0.10 | µg/L | J | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | OW-57 | 2203667-004C | 59 | 0.10 | µg/L | J | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | OW-58 | 2203667-005C | 83 | 0.10 | µg/L | J | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | OW-58A | 2203667-006C | 89 | 0.10 | µg/L | J | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | OW-63 | 2203667-007C | 94 | 0.10 | µg/L | J | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 2-Methylnaphthalene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| 3,4-Methylphenol | SW8270C | OW-58A | 2203667-006C | 4.6 | 5.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-------------------|
| Acenaphthene | SW8270C | MKTF-35 | 2203667-003C | 1.6 | 0.10 | µg/L | J | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | OW-57 | 2203667-004C | 2.4 | 0.10 | µg/L | J | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | OW-58 | 2203667-005C | 2.2 | 0.10 | µg/L | J | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | OW-63 | 2203667-007C | 0.76 | 0.10 | µg/L | J | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | OW-58A | 2203667-006C | ND | 0.10 | µg/L | UJ | ERPD-LCS, HZ-QAQC |
| Acenaphthene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | ERPD-LCS, HZ-QAQC |
| Acetone | SW8260B | FB 3-10-22 | 2203667-009a | 4.5 | 10 | µg/L | J | MDLRL |
| Anthracene | SW8270C | MKTF-35 | 2203667-003C | 0.30 | 0.10 | µg/L | J | HZ-QAQC |
| Anthracene | SW8270C | OW-57 | 2203667-004C | 0.20 | 0.10 | µg/L | J | HZ-QAQC |
| Anthracene | SW8270C | OW-58 | 2203667-005C | 0.30 | 0.10 | µg/L | J | HZ-QAQC |
| Anthracene | SW8270C | OW-58A | 2203667-006C | 0.42 | 0.10 | µg/L | J | HZ-QAQC |
| Anthracene | SW8270C | OW-63 | 2203667-007C | 0.20 | 0.10 | µg/L | J | HZ-QAQC |
| Anthracene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Anthracene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Anthracene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Antimony, Dissolved | E200.8 | MKTF-46 | 2203667-002E | 0.0015 | 0.0010 | mg/L | J- | LR-LCS |
| Antimony, Dissolved | E200.8 | EB 3-10-22 | 2203667-001E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | OW-57 | 2203667-004E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | OW-58 | 2203667-005E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | OW-58A | 2203667-006E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | OW-63 | 2203667-007E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | DUP 3-10-22 | 2203667-008E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Dissolved | E200.8 | MKTF-35 | 2203667-003E | 0.00071 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-46 | 2203667-002E | 0.00093 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-35 | 2203667-003E | 0.00058 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | DUP 3-10-22 | 2203667-008E | 0.00096 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | Trip Blank | 2203667-011a | 0.29 | 1.0 | µg/L | J | MDLRL |
| Benzene | SW8260B | DUP 3-10-22 | 2203667-008a | 0.39 | 1.0 | µg/L | U | MDLRL, TBD |
| Benzene | SW8260B | FB 3-10-22 | 2203667-009a | 0.37 | 1.0 | µg/L | U | MDLRL, TBD |
| Benzo(a)anthracene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | MKTF-35 | 2203667-003C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | OW-57 | 2203667-004C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | OW-58 | 2203667-005C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | OW-58A | 2203667-006C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | OW-63 | 2203667-007C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(a)anthracene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | MKTF-35 | 2203667-003C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | OW-57 | 2203667-004C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | OW-58 | 2203667-005C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | OW-58A | 2203667-006C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | OW-63 | 2203667-007C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Benzo(b)fluoranthene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chlorobenzene | SW8260B | MKTF-46 | 2203667-002a | 0.19 | 1.0 | µg/L | J | MDLRL |
| Chlorobenzene | SW8260B | DUP 3-10-22 | 2203667-008a | 0.38 | 1.0 | µg/L | J | MDLRL |
| Chloroform | SW8260B | MKTF-35 | 2203667-003a | 5.0 | 10 | µg/L | J | MDLRL |
| Chloroform | SW8260B | OW-57 | 2203667-004a | 9.5 | 50 | µg/L | J | MDLRL |
| Chloroform | SW8260B | OW-58 | 2203667-005a | 9.2 | 50 | µg/L | J | MDLRL |
| Chloroform | SW8260B | OW-63 | 2203667-007a | 17 | 50 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | EB 3-10-22 | 2203667-001a | 0.78 | 3.0 | µg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Chloromethane | SW8260B | MKTF-46 | 2203667-002a | 0.67 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-57 | 2203667-004a | 47 | 150 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-58 | 2203667-005a | 47 | 150 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-58A | 2203667-006a | 24 | 60 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-63 | 2203667-007a | 60 | 150 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP 3-10-22 | 2203667-008a | 0.67 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203667-011a | 0.69 | 3.0 | µg/L | U | MBD, MDLRL |
| Chrysene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | MKTF-35 | 2203667-003C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | OW-57 | 2203667-004C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | OW-58 | 2203667-005C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | OW-58A | 2203667-006C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | OW-63 | 2203667-007C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Chrysene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Cobalt, Dissolved | E 200.7 | MKTF-46 | 2203667-002E | 0.0029 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-46 | 2203667-002D | 0.0041 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-58A | 2203667-006D | 0.0027 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | DUP 3-10-22 | 2203667-008D | 0.0032 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-58 | 2203667-005F | 0.00515 | 0.0050 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-58A | 2203667-006F | 0.00527 | 0.0050 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-63 | 2203667-007F | 0.00773 | 0.0050 | mg/L | J- | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | EB 3-10-22 | 2203667-001F | ND | 0.0050 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | MKTF-46 | 2203667-002F | ND | 0.0050 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | MKTF-35 | 2203667-003F | ND | 0.0050 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | OW-57 | 2203667-004F | ND | 0.0050 | mg/L | UJ | ERPD-MS, LR-MS |
| Cyanide, Total | E335.4 | DUP 3-10-22 | 2203667-008F | ND | 0.0050 | mg/L | UJ | ERPD-MS, LR-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Fluoranthene | SW8270C | OW-58A | 2203667-006C | 0.26 | 0.20 | µg/L | J | HZ-QAQC |
| Fluoranthene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | MKTF-35 | 2203667-003C | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | OW-57 | 2203667-004C | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | OW-63 | 2203667-007C | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Fluoranthene | SW8270C | OW-58 | 2203667-005C | 0.18 | 0.20 | µg/L | J | HZ-QAQC, MDLRL |
| Fluorene | SW8270C | MKTF-35 | 2203667-003C | 0.54 | 0.10 | µg/L | J | HZ-QAQC |
| Fluorene | SW8270C | OW-57 | 2203667-004C | 4.1 | 0.10 | µg/L | J | HZ-QAQC |
| Fluorene | SW8270C | OW-58 | 2203667-005C | 3.0 | 0.10 | µg/L | J | HZ-QAQC |
| Fluorene | SW8270C | OW-58A | 2203667-006C | 4.7 | 0.10 | µg/L | J | HZ-QAQC |
| Fluorene | SW8270C | OW-63 | 2203667-007C | 1.4 | 0.10 | µg/L | J | HZ-QAQC |
| Fluorene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Fluorene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Fluorene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-35 | 2203667-003C | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-57 | 2203667-004C | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-58 | 2203667-005C | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-63 | 2203667-007C | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.30 | µg/L | UJ | HZ-QAQC |
| Isopropylbenzene | SW8260B | OW-57 | 2203667-004a | 11 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-58 | 2203667-005a | 35 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-35 | 2203667-003E | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-57 | 2203667-004D | 0.00049 | 0.00050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------------------|-----------|-----------------|---------------|----------|---------|-------|--------------------|------------------|
| Lead, Total | E200.8 | OW-58 | 2203667-005D | 0.00049 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-63 | 2203667-007D | 0.000081 | 0.00050 | mg/L | J | MDLRL |
| MTBE | SW8260B | OW-57 | 2203667-004a | 34 | 50 | µg/L | J | MDLRL |
| MTBE | SW8260B | OW-63 | 2203667-007a | 21 | 50 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | MKTF-35 | 2203667-003C | 96 | 0.10 | µg/L | J | HZ-QAQC |
| Naphthalene | SW8270C | OW-57 | 2203667-004C | 170 | 0.10 | µg/L | J | HZ-QAQC |
| Naphthalene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Naphthalene | SW8270C | OW-58 | 2203667-005C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Naphthalene | SW8270C | OW-58A | 2203667-006C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Naphthalene | SW8270C | OW-63 | 2203667-007C | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Naphthalene | SW8270C | MKTF-46 | 2203667-002c | 0.18 | 0.10 | µg/L | J | ERPD-FD, HZ-QAQC |
| Naphthalene | SW8270C | DUP 3-10-22 | 2203667-008c | 0.34 | 0.10 | µg/L | J | ERPD-FD, HZ-QAQC |
| n-Butylbenzene | SW8260B | MKTF-35 | 2203667-003a | 5.3 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-58A | 2203667-006a | 11 | 60 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-63 | 2203667-007a | 20 | 150 | µg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-57 | 2203667-004D | 0.055 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-58 | 2203667-005D | 0.051 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-58A | 2203667-006D | 0.034 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-63 | 2203667-007D | 0.025 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | DUP 3-10-22 | 2203667-008D | ND | 0.010 | mg/L | UJ | LR-LCS |
| n-Propylbenzene | SW8260B | OW-57 | 2203667-004a | 31 | 50 | µg/L | J | MDLRL |
| Perfluorobutanoic acid (PFBA) | EPA 537.1 | OW-63 | 2203667-007G | ND | 2.09 | ng/L | R | LR-EIS |
| Phenanthrene | SW8270C | MKTF-35 | 2203667-003C | 0.16 | 0.10 | µg/L | J | HZ-QAQC |
| Phenanthrene | SW8270C | OW-57 | 2203667-004C | 5.5 | 0.10 | µg/L | J | HZ-QAQC |
| Phenanthrene | SW8270C | OW-58 | 2203667-005C | 2.6 | 0.10 | µg/L | J | HZ-QAQC |
| Phenanthrene | SW8270C | OW-58A | 2203667-006C | 4.6 | 0.10 | µg/L | J | HZ-QAQC |
| Phenanthrene | SW8270C | OW-63 | 2203667-007C | 1.0 | 0.10 | µg/L | J | HZ-QAQC |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|---------------------|
| Phenanthrene | SW8270C | EB 3-10-22 | 2203667-001c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Phenanthrene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| Phenanthrene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.10 | µg/L | UJ | HZ-QAQC |
| p-Isopropyltoluene | SW8260B | OW-58A | 2203667-006a | 4.7 | 20 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB 3-10-22 | 2203667-001c | 0.24 | 0.20 | µg/L | J | HZ-QAQC |
| Pyrene | SW8270C | MKTF-46 | 2203667-002c | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Pyrene | SW8270C | DUP 3-10-22 | 2203667-008c | ND | 0.20 | µg/L | UJ | HZ-QAQC |
| Pyrene | SW8270C | OW-58A | 2203667-006C | 0.28 | 0.20 | µg/L | JB | EBD, HZ-QAQC |
| Pyrene | SW8270C | OW-63 | 2203667-007C | 0.24 | 0.20 | µg/L | U | EBD, HZ-QAQC |
| Pyrene | SW8270C | MKTF-35 | 2203667-003C | 0.16 | 0.20 | µg/L | U | EBD, HZ-QAQC, MDLRL |
| Pyrene | SW8270C | OW-57 | 2203667-004C | 0.16 | 0.20 | µg/L | U | EBD, HZ-QAQC, MDLRL |
| Pyrene | SW8270C | OW-58 | 2203667-005C | 0.18 | 0.20 | µg/L | U | EBD, HZ-QAQC, MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-46 | 2203667-002a | 0.21 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-35 | 2203667-003a | 1.6 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-58A | 2203667-006a | 3.3 | 20 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-63 | 2203667-007a | 9.4 | 50 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | DUP 3-10-22 | 2203667-008a | 0.37 | 1.0 | µg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-35 | 2203667-003D | 0.0045 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-57 | 2203667-004D | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-58 | 2203667-005D | 0.00045 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-58A | 2203667-006D | 0.00044 | 0.0010 | mg/L | J | MDLRL |
| Styrene | SW8260B | MKTF-35 | 2203667-003a | 2.3 | 10 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-58 | 2203667-005C | 6.5 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-58A | 2203667-006C | 4.2 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-63 | 2203667-007C | 3.3 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | DUP 3-10-22 | 2203667-008C | 0.046 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | EB 3-10-22 | 2203667-001C | 0.025 | 0.064 | mg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH DRO | SW8015 | MKTF-46 | 2203667-002C | 0.042 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-46 | 2203667-002a | 0.061 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | DUP 3-10-22 | 2203667-008a | 0.066 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | Trip Blank | 2203667-011a | 0.034 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | EB 3-10-22 | 2203667-001a | 0.039 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | FB 3-10-22 | 2203667-009a | 0.040 | 0.050 | mg/L | U | MBD, MDLRL |
| Trichloroethene | SW8260B | MKTF-35 | 2203667-003a | 3.0 | 10 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-46 | 2203667-002E | 0.0021 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-57 | 2203667-004E | 0.0023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-58 | 2203667-005E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-63 | 2203667-007E | 0.0027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-46 | 2203667-002D | 0.0047 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-57 | 2203667-004D | 0.0036 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58 | 2203667-005D | 0.0049 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-63 | 2203667-007D | 0.0026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP 3-10-22 | 2203667-008D | 0.0049 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | MKTF-46 | 2203667-002a | 0.77 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-58A | 2203667-006E | 0.015 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-63 | 2203667-007E | 0.015 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-46 | 2203667-002E | 0.0099 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-35 | 2203667-003E | 0.0057 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-57 | 2203667-004E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-58 | 2203667-005E | 0.0091 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP 3-10-22 | 2203667-008E | 0.0081 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-10-22 | 2203667-001E | 0.007 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, GW Sampling 2022 | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/10/2022 |
| Date Validated: 03/31/2022 | Sample End Date: 03/10/2022 |
| Parameters Included: <ul style="list-style-type: none">Total Suspended Solids (TSS) by Standard Methods for the Examination of Water and Wastewater (SM) Method 2540D | |
| Laboratory Project ID: 2203670 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report package generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- Laboratory control samples (LCS)

Method compliance was established by reviewing sample integrity, holding times, detection limits, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| OW-57 | 2203670-001 |
| OW-58A | 2203670-002 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ✓ Laboratory Blanks (Items 11 and 12)
- Matrix Spikes (MS) and Matrix Spike Duplicates (MSD) (Items 13 and 14)
- ✓ LCS (Items 15 and 16)
- System Monitoring Compounds (i.e., Surrogates) (Item 17)
- Field, Equipment, and Trip Blanks (Items 18 and 19)
- Field Duplicates (Items 20 and 21)
- Laboratory Duplicates (Item 22)
- Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Trihydro Data Validation Variance Documentation, February 2021.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers were not applied as a result of this validation.

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 2 data points. The data completeness measure for this data package is calculated to be 100% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | Yes |
| Comments: The laboratory did not identify non-conformances regarding the analytical data. | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | Yes |
| Comments: The laboratory did not apply qualification flags or other notes to the data in the laboratory report. | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times. | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| Comments: The reporting limits for the analyses were reviewed and appeared to be acceptable. Dilutions were not applied for the analyses of the submitted samples. | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | Yes |
| Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC. | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between -0.8°C and 5.3°C as noted on the CoC and the <i>Sample Log-in Check List</i> . The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen. | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | Yes |
| Comments: Target analytes were reported as not detected in the laboratory blanks. | |



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | No |
| Comments: The total number of matrix spike samples prepared was not equal to at least 5% of the total number of samples. Matrix spikes were not prepared for the analyses in this data set. | |
| 14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? | N/A |
| Comments: MS/MSD samples were not prepared using project samples as the sample source. | |
| 15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples. | |
| 16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? | Yes |
| Comments: The LCS percent recoveries were within laboratory QC limits. LCSDs were not analyzed as part of this sample set. | |
| 17. Were surrogate recoveries within laboratory QC limits? | N/A |
| Comments: Surrogates were not required for the analyses included in this data set. | |
| 18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | |
| 19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? | N/A |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | |
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No |
| Comments: Field duplicates were not collected as part of this sample set. | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | N/A |
| Comments: Field duplicates were not collected as part of this sample set. | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? | N/A |
| Comments: Laboratory duplicate samples were not prepared for this sample set. | |



| VALIDATION CRITERIA CHECKLIST | | |
|---|--|-----|
| 23. Were the following data relationships realistic and acceptable? | | |
| <ul style="list-style-type: none">Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? | | N/A |
| Comments: Target analytes were not reported by more than one method. | | |
| <ul style="list-style-type: none">Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? | | N/A |
| Comments: Total and dissolved metals analyses were not performed for this data set. | | |



DATA QUALIFICATION SUMMARY

Data qualifiers were not applied as a result of this validation.





Tier II Data Validation Report Summary

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|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/15/2022 |
| Date Validated: 04/04/2022 | Sample End Date: 03/15/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203825 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB 3-15-22 | 2203825-001 |
| OW-1 | 2203825-002 |
| MKTF-17R | 2203825-003 |
| MKTF-18R | 2203825-004 |
| MKTF-38 | 2203825-005 |
| MKTF-04R | 2203825-006 |
| MKTF-11 | 2203825-007 |
| MKTF-10 | 2203825-008 |
| FB 3-15-22 | 2203825-009 |
| DUP-3-15-22 | 2203825-010 |
| Trip Blank | 2203825-011 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)
- ✓ Data Relationships (Item 23)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, February 2021.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 720 data points. The data completeness calculation does not include submitted blank sample results. Three data points were rejected. The data completeness measure for this data package is calculated to be 99.58% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270: "S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------------|----------------------------|------------------------|
| 200.8 | MKTF-38 | Dissolved Barium | 5 |
| 200.8 | MKTF-11, MKTF-10, OW-1 | Select Total Metals | 5 |
| 8015D | MKTF-04R | GRO | 5 |
| 8260B | MKTF-04R | VOCs | 5 |
| 200.8 | MKTF-17R | Dissolved Barium | 10 |
| 8015D | Multiple Samples | DRO, MRO, GRO | 10 |
| 8260B | Multiple Samples | VOCs | 10 |
| 8270 SIM | MKTF-04R | 1,4-Dioxane | 10 |
| 200.8 | MKTF-38, MKTF-17R | Total Barium | 20 |
| 200.8 | MKTF-04R | Dissolved Barium | 20 |
| 200.8 | MKTF-18R, MKTF-04R | Total Barium | 50 |
| 200.8 | MKTF-18R | Dissolved Barium | 50 |
| 8260B | MKTF-04R | Benzene | 50 |
| 8260B | Multiple Samples | Select VOCs | 100 |
| 200.8 | MKTF-11 | Dissolved and Total Barium | 200 |
| 200.8 | MKTF-10 | Dissolved and Total Barium | 500 |
| 8260B | MKTF-17R | Toluene | 1,000 |



VALIDATION CRITERIA CHECKLIST

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between -0.1°C and 1.0°C as noted on the CoC and the *Sample Log-in Check List*. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 3.0°C as noted on the CoC.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|----------|---------------|--------|----------------------|
| 8015D | DRO | 66219 | 0.018 mg/L |
| 8015D | DRO | 66236 | 0.030 mg/L |
| 8260B | Chloromethane | R86601 | 0.66 $\mu\text{g/L}$ |
| 8260B | Chloromethane | R86626 | 0.68 $\mu\text{g/L}$ |
| 8270 SIM | Pyrene | R86628 | 0.22 $\mu\text{g/L}$ |



VALIDATION CRITERIA CHECKLIST

| Method | Analyte | Batch | Concentration |
|--------|---------|--------|---------------|
| 8015D | GRO | R86601 | 0.044 mg/L |
| 8015D | GRO | G86626 | 0.034 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|--------------------------|
| 200.7 | Dissolved Metals | A86535 | EB 3-15-22 |
| 200.8 | Total Metals | 66254 | EB 3-15-22, OW-1 |
| 200.8 | Dissolved Metals | A86624 | MKTF-11, MKTF-10 |
| 200.8 | Dissolved Metals | B86600 | Not Prepared |
| 245.1 | Dissolved and Total Mercury | 66284 | DUP-3-15-22 |
| 504.1 | EDB | 66256 | Not Prepared |
| 4500CN E | Cyanide | WG1835677 | Not Associated, MKTF-04R |
| 8015D | TPH DRO and MRO | 66219 | Not Prepared |
| 8015D | TPH DRO and MRO | 66236 | Not Prepared |
| 8015D | TPH GRO | G86626 | Not Prepared |
| 8015D | TPH GRO | R86601 | Not Prepared |
| 8260B | VOCs | R86601 | Not Prepared |
| 8260B | VOCs | R86626 | Not Prepared |
| 8270C | SVOCs | 66226 | Not Prepared |
| 8270C SIM | SVOCs | R86628 | Not Prepared |
| 8270C SIM | 1,4-Dioxane | R86665 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exception.

The MSD recovery for cyanide in Method 4500CN E batch WG1835677 (R86794) was outside the data validation QC limits of 75-125% at 74.8%. Cyanide results were qualified as J- if detected and UJ if not detected in the associated samples due to evidence of potential low bias.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exception.

The LCS recovery for DRO in Method 8015D batch 66219 was outside the acceptance limits of 31.7-75.4% at 77.8%. DRO was detected in the associated samples, and these results were qualified as J+ due to potential high bias.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|----------|--------------------|------------|
| 8270C | 2-Fluorophenol | MKTF-17R | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-17R | 27.3% | 28.5-64.7% |
| 8270C | Phenol-d ₅ | MKTF-11 | 26.9% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-11 | 12.6% | 18.6-129% |
| 8270C | 2-Fluorophenol | MKTF-10 | 0.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-10 | 24.7% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-10 | 1.8% | 18.6-129% |

Since Method 8270 surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample DUP-3-15-22, and qualification of sample data was not required.

For samples MKTF-17R and MKTF-11, two or three of the three acid extractable surrogates reported recoveries above 10%. Therefore, the associated target analytes in these samples with surrogate recoveries that were less than the lower laboratory QC limits were qualified as J- if detected and UJ if not detected due to potential low bias.

For sample MKTF-10, two of the three acid extractable surrogates were recovered below 10%. The target analytes associated with surrogate recoveries that were less than 10% were qualified as R if not detected in the identified samples indicating rejected results, data not usable due to evidence of extreme low bias. The detected results were qualified as J- for sample MKTF-10 due to potential low bias.

The DRO and MRO results for samples MKTF-17R and MKTF-18R were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-15-22, and one equipment blank sample, EB 3-15-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | GRO | 0.035 mg/L |
| Trip Blank | 8260B | Chloromethane | 0.66 µg/L |
| FB 3-15-22 | 8260B | 1,1-Dichloroethene | 0.57 µg/L |
| FB 3-15-22 | 8260B | 2-Butanone | 7.9 µg/L |
| FB 3-15-22 | 8260B | Chloromethane | 0.89 µg/L |
| EB 3-15-22 | 200.7 | Dissolved Zinc | 0.0063 mg/L |
| EB 3-15-22 | 200.8 | Dissolved Barium | 0.00082 mg/L |
| EB 3-15-22 | 8015D | DRO | 0.026 mg/L |
| EB 3-15-22 | 8015D | GRO | 0.037 mg/L |
| EB 3-15-22 | 8260B | 2-Butanone | 7.30 µg/L |
| EB 3-15-22 | 8260B | Benzene | 0.23 µg/L |
| EB 3-15-22 | 8260B | Chloromethane | 0.91 µg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than or equal to the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane, DRO, and GRO results were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-15-22 was collected as a field duplicate of sample OW-1.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

RPD values could not be calculated for 1-methylnaphthalene and 2-methylnaphthalene for the field duplicate pair OW-1 and DUP-3-15-22 since the analytes were detected in the parent sample and were undetected in the duplicate sample. As the detections in the parent sample were greater than two times the reporting limits, 1-methylnaphthalene and 2-methylnaphthalene were qualified as J and UJ for the parent and duplicate samples, respectively.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1835677 from sample EB 3-15-22 and from a sample not associated with this data set.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic and acceptable?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270), and the results were in agreement? Yes

Comments: Target analytes were not reported by more than one method in this data set, with the following exception.

The target analyte 1,2-dibromoethane (EDB) was reported from analyses by both Method 8260B and Method 504.1. This analyte was reported as not detected by both methods.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The total metals concentrations were greater than or equal to the dissolved fractions, with the following exceptions.

| Sample ID | Analyte | Total Result | Dissolved Result | Reporting Limit | Units | RPD |
|-------------|----------|--------------|------------------|-----------------|-------|---------|
| OW-1 | Mercury | ND | 0.00036 | 0.00020 | mg/L | ----- ♦ |
| MKTF-10 | Barium | 7.9 | 8.7 | 0.50 | mg/L | 9.6% |
| DUP-3-15-22 | Barium | 0.041 | 0.044 | 0.0010 | mg/L | 7.1% |
| EB 3-15-22 | Barium | ND | 0.00082 | 0.0010 | mg/L | ----- ♦ |
| OW-1 | Barium | 0.044 | 0.046 | 0.0050 / 0.0010 | mg/L | 4.4% |
| MKTF-11 | Cobalt | 0.0039 | 0.0058 | 0.0050 / 0.0060 | mg/L | ♦ |
| MKTF-17R | Cobalt | 0.0023 | 0.0033 | 0.0010 / 0.0060 | mg/L | ♦ |
| MKTF-11 | Selenium | ND | 0.00046 | 0.0050 / 0.0010 | mg/L | ----- ♦ |
| DUP-3-15-22 | Selenium | 0.0022 | 0.0028 | 0.0010 | mg/L | ♦ |
| MKTF-18R | Zinc | 0.0093 | 0.010 | 0.010 | mg/L | ♦ |
| DUP-3-15-22 | Zinc | ND | 0.0077 | 0.010 | mg/L | ----- ♦ |
| EB 3-15-22 | Zinc | ND | 0.0063 | 0.010 | mg/L | ----- ♦ |
| OW-1 | Zinc | ND | 0.0094 | 0.010 | mg/L | ----- ♦ |

----- RPD could not be calculated.

♦ = One or both of the detections were less than 5 times the applicable reporting limits, and qualification of data was not required.

The differences for the corresponding analytical results were within five times the applicable reporting limits and validation action was not required, or the RPDs between the results were less than 30% indicating that the data were within the measurement uncertainty for the methods, and qualification of results was not required based on the analytical inconsistencies.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-1
Field Duplicate Sample ID: DUP-3-15-22 | | | | |
|--|----------------|-------------------|-----------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Vanadium, Dissolved | E 200.7 | 0.041 mg/L | 0.044 mg/L | 7.1% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0094 mg/L | 0.0077 mg/L | 19.9% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.00052 mg/L | 0.00068 mg/L | 26.7% +/-RL |
| Arsenic, Total | E200.8 | 0.00069 mg/L | 0.00080 mg/L | 14.8% +/-RL |
| Barium, Dissolved | E200.8 | 0.046 mg/L | 0.044 mg/L | 4.4% |
| Barium, Total | E200.8 | 0.044 mg/L | 0.041 mg/L | 7.1% |
| Chromium, Dissolved | E200.8 | 0.00052 mg/L | 0.00051 mg/L | 1.9% +/-RL |
| Chromium, Total | E200.8 | 0.0031 mg/L | 0.0031 mg/L | 0.0% |
| Lead, Dissolved | E200.8 | 0.000077 mg/L | ND (0.00050 mg/L) | DL |
| Lead, Total | E200.8 | 0.00019 mg/L | 0.00018 mg/L | 5.4% +/-RL |
| Nickel, Dissolved | E200.8 | 0.00052 mg/L | 0.00062 mg/L | 17.5% +/-RL |
| Nickel, Total | E200.8 | 0.0021 mg/L | 0.0022 mg/L | 4.7% |
| Selenium, Dissolved | E200.8 | 0.0027 mg/L | 0.0028 mg/L | 3.6% |
| Selenium, Total | E200.8 | 0.0027 mg/L | 0.0022 mg/L | 20.4% |
| Vanadium, Total | E200.8 | 0.044 mg/L | 0.045 mg/L | 2.2% |
| Mercury, Dissolved | E245.1 | 0.00036 mg/L | ND (0.00020 mg/L) | DL |
| TPH DRO | SW8015 | 0.022 mg/L | 0.026 mg/L | 16.7% +/-RL |
| TPH GRO | SW8015 | 0.041 mg/L | 0.036 mg/L | 13.0% +/-RL |
| 1,2-Dichloroethane | SW8260B | 0.42 µg/L | 0.41 µg/L | 2.4% +/-RL |
| Chloromethane | SW8260B | 0.77 µg/L | 0.75 µg/L | 2.6% +/-RL |
| MTBE | SW8260B | 2.3 µg/L | 2.3 µg/L | 0.0% |
| 1,4-Dioxane | SW8270C | 0.20 µg/L | ND (1.0 µg/L) | DL |
| 1-Methylnaphthalene | SW8270C | 0.28 µg/L | ND (0.10 µg/L) | DL |
| 2-Methylnaphthalene | SW8270C | 0.40 µg/L | ND (0.10 µg/L) | DL |
| Naphthalene | SW8270C | 0.14 µg/L | ND (0.10 µg/L) | DL |
| Phenanthrene | SW8270C | 0.080 µg/L | ND (0.10 µg/L) | DL |
| Pyrene | SW8270C | 0.24 µg/L | ND (0.40 µg/L) | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>RPD values could not be calculated for 1-methylnaphthalene and 2-methylnaphthalene since the analytes were detected in the parent sample and were undetected in the duplicate sample. As the detections in the parent sample were greater than two times the reporting limits, 1-methylnaphthalene and 2-methylnaphthalene were qualified as J and UJ for the parent and duplicate samples, respectively.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| EBD | Equipment blank detection |
| FBD | Field blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-17R | 2203825-003a | 7.5 | 10 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | MKTF-38 | 2203825-005a | 0.61 | 1 | µg/L | U | FBD, MDLRL |
| 1,1-Dichloroethene | SW8260B | FB 3-15-22 | 2203825-009a | 0.57 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-1 | 2203825-002a | 0.42 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-17R | 2203825-003a | 4.2 | 10 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-38 | 2203825-005a | 0.41 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-04R | 2203825-006a | 2.8 | 5 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-11 | 2203825-007a | 4.3 | 10 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-10 | 2203825-008a | 4.1 | 10 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-3-15-22 | 2203825-010a | 0.41 | 1 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-1 | 2203825-002c | 0.2 | 1 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-1 | 2203825-002c | 0.28 | 0.1 | µg/L | J | ERPD-FD |
| 1-Methylnaphthalene | SW8270C | DUP-3-15-22 | 2203825-010c | ND | 0.1 | µg/L | UJ | ERPD-FD |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-17R | 2203825-003c | ND | 5 | µg/L | UJ | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-11 | 2203825-007c | ND | 5 | µg/L | UJ | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-10 | 2203825-008c | ND | 5 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| 2,4-Dimethylphenol | SW8270C | MKTF-17R | 2203825-003c | ND | 5 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-18R | 2203825-004c | 2.7 | 5 | µg/L | J | MDLRL |
| 2,4-Dimethylphenol | SW8270C | MKTF-11 | 2203825-007c | 4.3 | 5 | µg/L | J- | LR-SUR, MDLRL |
| 2,4-Dimethylphenol | SW8270C | MKTF-10 | 2203825-008c | 16 | 5 | µg/L | J- | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-17R | 2203825-003c | ND | 5 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-11 | 2203825-007c | ND | 5 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-10 | 2203825-008c | ND | 5 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | EB 3-15-22 | 2203825-001a | 7.3 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | MKTF-10 | 2203825-008a | 21 | 100 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | FB 3-15-22 | 2203825-009a | 7.9 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-1 | 2203825-002c | 0.4 | 0.1 | µg/L | J | ERPD-FD |
| 2-Methylnaphthalene | SW8270C | DUP-3-15-22 | 2203825-010c | ND | 0.1 | µg/L | UJ | ERPD-FD |
| 2-Methylphenol | SW8270C | MKTF-17R | 2203825-003c | 20 | 5 | µg/L | J- | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-18R | 2203825-004c | 4.4 | 5 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | MKTF-11 | 2203825-007c | 6.4 | 5 | µg/L | J- | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-10 | 2203825-008c | 6.1 | 5 | µg/L | J- | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-17R | 2203825-003c | 11 | 5 | µg/L | J- | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-18R | 2203825-004c | 3.5 | 5 | µg/L | J | MDLRL |
| 3,4-Methylphenol | SW8270C | MKTF-11 | 2203825-007c | 3.8 | 5 | µg/L | J- | LR-SUR, MDLRL |
| 3,4-Methylphenol | SW8270C | MKTF-10 | 2203825-008c | ND | 5 | µg/L | R | LR-SUR |
| Arsenic, Dissolved | E200.8 | OW-1 | 2203825-002E | 0.00052 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-3-15-22 | 2203825-010E | 0.00068 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-1 | 2203825-002D | 0.00069 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-3-15-22 | 2203825-010D | 0.0008 | 0.001 | mg/L | J | MDLRL |
| Benzene | SW8260B | EB 3-15-22 | 2203825-001a | 0.23 | 1 | µg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-38 | 2203825-005a | 0.49 | 1 | µg/L | U | EBD, MDLRL |
| Chloroform | SW8260B | MKTF-17R | 2203825-003a | 7.2 | 10 | µg/L | J | MDLRL |
| Chloroform | SW8260B | MKTF-18R | 2203825-004a | 1.9 | 10 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Chloroform | SW8260B | MKTF-04R | 2203825-006a | 2.1 | 5 | µg/L | J | MDLRL |
| Chloroform | SW8260B | MKTF-11 | 2203825-007a | 3.5 | 10 | µg/L | J | MDLRL |
| Chloroform | SW8260B | MKTF-10 | 2203825-008a | 4 | 10 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | EB 3-15-22 | 2203825-001a | 0.91 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | OW-1 | 2203825-002a | 0.77 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-38 | 2203825-005a | 0.78 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-04R | 2203825-006a | 3.9 | 15 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-10 | 2203825-008a | 27 | 30 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB 3-15-22 | 2203825-009a | 0.89 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP-3-15-22 | 2203825-010a | 0.75 | 3 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203825-011a | 0.66 | 3 | µg/L | U | MBD, MDLRL |
| Chromium, Total | E 200.7 | OW-1 | 2203825-002D | 0.0033 | 0.006 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-17R | 2203825-003D | 0.0041 | 0.006 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-18R | 2203825-004D | 0.0042 | 0.006 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-10 | 2203825-008D | 0.0059 | 0.006 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-3-15-22 | 2203825-010D | 0.0029 | 0.006 | mg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-18R | 2203825-004a | 4.6 | 10 | µg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-10 | 2203825-008a | 6.2 | 10 | µg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-17R | 2203825-003E | 0.0033 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-18R | 2203825-004E | 0.0032 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-38 | 2203825-005E | 0.0038 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-04R | 2203825-006E | 0.0056 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-11 | 2203825-007E | 0.0058 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-17R | 2203825-003D | 0.0037 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-10 | 2203825-008D | 0.0058 | 0.006 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | EB 3-15-22 | 2203825-001F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | OW-1 | 2203825-002F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | MKTF-17R | 2203825-003F | ND | 0.005 | mg/L | UJ | LR-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|-----------------|
| Cyanide, Total | E335.4 | MKTF-18R | 2203825-004F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | MKTF-38 | 2203825-005F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | MKTF-04R | 2203825-006F | 0.00801 | 0.005 | mg/L | J- | LR-MS |
| Cyanide, Total | E335.4 | MKTF-11 | 2203825-007F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | MKTF-10 | 2203825-008F | ND | 0.005 | mg/L | UJ | LR-MS |
| Cyanide, Total | E335.4 | DUP-3-15-22 | 2203825-010F | ND | 0.005 | mg/L | UJ | LR-MS |
| Isopropylbenzene | SW8260B | MKTF-18R | 2203825-004a | 4.4 | 10 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-04R | 2203825-006a | 2.3 | 5 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-1 | 2203825-002E | 0.000077 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-17R | 2203825-003E | 0.00024 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-38 | 2203825-005E | 0.000068 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-1 | 2203825-002D | 0.00019 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-11 | 2203825-007D | 0.002 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-3-15-22 | 2203825-010D | 0.00018 | 0.0005 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | MKTF-10 | 2203825-008a | 5.6 | 30 | µg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-10 | 2203825-008a | 9.6 | 10 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-17R | 2203825-003a | 16 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-18R | 2203825-004a | 3.5 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-11 | 2203825-007a | 5.3 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-10 | 2203825-008a | 11 | 30 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-17R | 2203825-003E | 0.0058 | 0.01 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-18R | 2203825-004E | 0.0057 | 0.01 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-38 | 2203825-005E | 0.0055 | 0.01 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-04R | 2203825-006E | 0.0083 | 0.01 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-17R | 2203825-003D | 0.0061 | 0.01 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-18R | 2203825-004D | 0.0098 | 0.01 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-18R | 2203825-004a | 6.6 | 10 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-04R | 2203825-006a | 3.1 | 5 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|--------------------|
| Phenanthrene | SW8270C | OW-1 | 2203825-002c | 0.08 | 0.1 | µg/L | J | MDLRL |
| Phenol | SW8270C | MKTF-17R | 2203825-003c | 7.5 | 5 | µg/L | J- | LR-SUR |
| Phenol | SW8270C | MKTF-11 | 2203825-007c | 30 | 5 | µg/L | J- | LR-SUR |
| Phenol | SW8270C | MKTF-10 | 2203825-008c | 22 | 5 | µg/L | J- | LR-SUR |
| p-Isopropyltoluene | SW8260B | MKTF-17R | 2203825-003a | 5 | 10 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-18R | 2203825-004a | 2.2 | 10 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-04R | 2203825-006a | 1.3 | 5 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-10 | 2203825-008a | 7.7 | 10 | µg/L | J | MDLRL |
| Pyrene | SW8270C | OW-1 | 2203825-002c | 0.24 | 0.4 | µg/L | U | MBD, MDLRL |
| Pyrene | SW8270C | MKTF-17R | 2203825-003c | 0.42 | 0.4 | µg/L | JB | MBD |
| Pyrene | SW8270C | MKTF-38 | 2203825-005c | 0.16 | 0.4 | µg/L | U | MBD, MDLRL |
| Pyrene | SW8270C | MKTF-04R | 2203825-006c | 0.22 | 0.4 | µg/L | U | MBD, MDLRL |
| Pyrene | SW8270C | MKTF-11 | 2203825-007c | 0.2 | 0.4 | µg/L | U | MBD, MDLRL |
| Pyrene | SW8270C | MKTF-10 | 2203825-008c | 0.18 | 0.4 | µg/L | U | MBD, MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-17R | 2203825-003a | 5.5 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-18R | 2203825-004a | 1.7 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-11 | 2203825-007a | 4.4 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-10 | 2203825-008a | 5.7 | 10 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-11 | 2203825-007E | 0.00046 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-18R | 2203825-004D | 0.00087 | 0.001 | mg/L | J | MDLRL |
| Styrene | SW8260B | MKTF-17R | 2203825-003a | 2.6 | 10 | µg/L | J | MDLRL |
| Toluene | SW8260B | MKTF-38 | 2203825-005a | 0.8 | 1 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | EB 3-15-22 | 2203825-001C | 0.026 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-1 | 2203825-002C | 0.022 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-17R | 2203825-003C | 7 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-18R | 2203825-004C | 4 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-38 | 2203825-005C | 0.11 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-04R | 2203825-006C | 1.5 | 0.064 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH DRO | SW8015 | MKTF-11 | 2203825-007C | 0.92 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-10 | 2203825-008C | 1.9 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | DUP-3-15-22 | 2203825-010C | 0.026 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | EB 3-15-22 | 2203825-001a | 0.037 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-1 | 2203825-002a | 0.041 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-38 | 2203825-005a | 0.047 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | DUP-3-15-22 | 2203825-010a | 0.036 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | Trip Blank | 2203825-011a | 0.035 | 0.05 | mg/L | U | MBD, MDLRL |
| TPH ORO | SW8015 | MKTF-38 | 2203825-005C | 0.066 | 0.08 | mg/L | J | MDLRL |
| Trichloroethene | SW8260B | MKTF-38 | 2203825-005a | 0.57 | 1 | µg/L | J | MDLRL |
| Trichloroethene | SW8260B | MKTF-04R | 2203825-006a | 2.5 | 5 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-1 | 2203825-002E | 0.041 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-38 | 2203825-005E | 0.0041 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-3-15-22 | 2203825-010E | 0.044 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-1 | 2203825-002D | 0.043 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-17R | 2203825-003D | 0.0056 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-18R | 2203825-004D | 0.011 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-38 | 2203825-005D | 0.027 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-04R | 2203825-006D | 0.024 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-11 | 2203825-007D | 0.0049 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-10 | 2203825-008D | 0.018 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-3-15-22 | 2203825-010D | 0.042 | 0.05 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-17R | 2203825-003a | 4.4 | 10 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-10 | 2203825-008a | 8 | 10 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-15-22 | 2203825-001E | 0.0063 | 0.01 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-1 | 2203825-002E | 0.0094 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-17R | 2203825-003E | 0.033 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-18R | 2203825-004E | 0.01 | 0.01 | mg/L | JB | EBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | MKTF-38 | 2203825-005E | 0.0055 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-04R | 2203825-006E | 0.012 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-11 | 2203825-007E | 0.01 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-10 | 2203825-008E | 0.008 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-3-15-22 | 2203825-010E | 0.0077 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | MKTF-18R | 2203825-004D | 0.0078 | 0.01 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/16/2022 |
| Date Validated: 07/26/2022 | Sample End Date: 03/16/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203920 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB 3-16-22 | 2203920-001 |
| MKTF-40 | 2203920-002 |
| MKTF-31 | 2203920-003 |
| MKTF-25 | 2203920-004 |
| MKTF-24 | 2203920-005 |
| MKTF-02R | 2203920-006 |
| FB 3-16-22 | 2203920-007 |
| DUP-3-16-22 | 2203920-008 |
| Trip Blank | 2203920-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ⊗ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|---|
| J | Estimated concentration |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Seven data points were rejected. The data completeness measure for this data package is calculated to be 98.70% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C: "S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|-----------|----------------------------|-----------------------------------|-----------------|
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 245.1 | MKTF-24 | Total Mercury | 5 |
| 8015D | MKTF-31, DUP-3-16-22 | GRO | 5 |
| 8260B | MKTF-31, DUP-3-16-22 | VOCs | 5 |
| 8015D | MKTF-25, MKTF-24 | GRO | 10 |
| 8260B | MKTF-02R, MKTF-25, MKTF-24 | VOCs | 10 |
| 8270C SIM | Multiple Samples | 1,4-Dioxane | 10 |
| 504.1 | MKTF-02R | EDB | 20 |
| 8260B | MKTF-24 | Benzene | 100 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.2°C , 0.9°C , 1.3°C , and 3.9°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.6°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

No

Comments: The samples were extracted/digested and analyzed within method-specific holding times, with the following exceptions.

Method 4500 CN E: Samples EB 3-16-22, MKTF-40, MKTF-31, and MKTF-25 were analyzed for cyanide outside the defined holding time of 14 days by approximately 1 day. Cyanide was detected in samples MKTF-40, MKTF-31, and MKTF-25 by Method 4500 CN E and the results were assigned J qualifiers based on the holding time exceedances. The non-detect result for sample EB 3-16-22 was assigned an R qualifier to indicate that the result was rejected based on the holding time exceedance.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|---------------|--------|-----------------------|
| 8015D | DRO | 66236 | 0.030 mg/L |
| 8260B | Chloromethane | R86626 | 0.68 $\mu\text{g/L}$ |
| 8260B | Chloromethane | R86666 | 0.66 $\mu\text{g/L}$ |
| 8015D | GRO | G86626 | 0.034 $\mu\text{g/L}$ |

Detections of DRO, chloromethane, and GRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|--------------------------|
| 200.7 | Total Metals | 66642 | Not Prepared |
| 200.7 | Total Metals | 66643 | Not Prepared |
| 200.7 | Dissolved Metals | A86535 | Not Prepared |
| 200.8 | Total Metals | 66254 | Not Prepared |
| 200.8 | Dissolved Metals | B86624 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 66370 | MKTF-24 |
| 504.1 | EDB | 66256 | Not Prepared |
| 4500CN E | Cyanide | WG1838528 | Not Associated |
| 4500CN E | Cyanide | WG1837590 | Not Associated |
| 4500CN E | Cyanide | WG1836404 | Not Associated, MKTF-02R |
| 8015D | TPH DRO and MRO | 66236 | Not Prepared |
| 8015D | TPH GRO | G86626 | MKTF-31 |
| 8260B | VOCs | R86626 | MKTF-40 |
| 8260B | VOCs | R86666 | Not Prepared |
| 8270C | SVOCs | 66244 | Not Prepared |
| 8270C SIM | SVOCs | R86665 | Not Prepared |
| 8270C SIM | 1,4-Dioxane | R86694 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

| <u>Method</u> | <u>Analyte</u> | <u>Batch</u> | <u>MS/MSD RPD</u> | <u>RPD QC Limits</u> |
|------------------|----------------|------------------|-------------------|----------------------|
| 4500 CN E | Cyanide | WG1836404 | 23% | 20% |
| 8015D | TPH GRO | G86626 | 26.9% | 20% |

The identified analytes with MS/MSD RPD values that were above the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| <u>Method</u> | <u>Analyte</u> | <u>Batch</u> | <u>LCS Recovery</u> | <u>LCS/LCSD QC Limits</u> |
|---------------|----------------|--------------|---------------------|---------------------------|
| 200.7 | Total Nickel | 66642 | 67.7% | 70-130% |
| 200.7 | Total Nickel | 66643 | 69.0% | 70-130% |

Detections of total nickel in the associated samples were assigned J- qualifiers due to potential low bias. Total nickel was not detected in the associated sample EB 3-16-22 and the result was assigned a UJ qualifier.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| <u>Method</u> | <u>Surrogate</u> | <u>Sample</u> | <u>Surrogate Recovery</u> | <u>QC Limits</u> |
|---------------|-----------------------|---------------|---------------------------|------------------|
| 8270C | 2-Fluorophenol | MKTF-02R | 6.13% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-02R | 19.0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-02R | 2.36% | 18.6-129% |

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. **Since 2 of the 3 acid fraction surrogates were recovered below 10% in sample MKTF-02R, acid fraction analytes were assigned R qualifiers indicating rejected results.**

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-16-22, and one equipment blank sample, EB 3-16-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | 1,1-Dichloroethene | 0.68 µg/L |
| Trip Blank | 8260B | Chloromethane | 0.69 µg/L |
| FB-3-16-22 | 8260B | 1,1-Dichloroethene | 0.57 µg/L |
| FB-3-16-22 | 8260B | 2-Butanone | 5.7 µg/L |
| FB-3-16-22 | 8260B | Chloromethane | 0.84 µg/L |
| EB 3-16-22 | 200.7 | Dissolved Zinc | 0.0067 mg/L |
| EB 3-16-22 | 8015D | GRO | 0.036 mg/L |
| EB 3-16-22 | 8260B | 2-Butanone | 8.5 µg/L |
| EB 3-16-22 | 8260B | Chloromethane | 1.1 µg/L |

Detections of 1,1-dichloroethene, 2-butanone, and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The chloromethane (batches R86626 and R86666) and GRO (batch G86626) results were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-16-22 was collected as a field duplicate of sample MKTF-31.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1836404 | Not Associated, MKTF-24 |
| 4500CN E | Cyanide | WG1837590 | MKTF-25. Not Associated |
| 4500CN E | Cyanide | WG1838528 | MKTF-31, Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for laboratory duplicates prepared from project samples were within laboratory acceptance limits or were not applicable since the result for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-24 | Arsenic | 0.0030 | 0.0031 |
| MKTF-24 | Barium | 0.76 | 0.81 |
| MKTF-40 | Cobalt | 0.0039 | 0.0051 |
| MKTF-40 | Nickel | 0.0094 | 0.010 |
| MKTF-24 | Nickel | 0.031 | 0.033 |
| MKTF-02R | Nickel | 0.013 | 0.014 |
| MKTF-40 | Silver | ND | 0.0016 |
| MKTF-02R | Silver | ND | 0.0016 |
| EB 3-16-22 | Zinc | ND | 0.0067 |
| MKTF-40 | Zinc | 0.0079 | 0.010 |
| MKTF-24 | Zinc | 0.0076 | 0.0088 |
| MKTF-02R | Zinc | 0.011 | 0.013 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-31
Field Duplicate Sample ID: DUP-3-16-22 | | | | |
|--|---------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.12 mg/L | 0.12 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.30 mg/L | 0.34 mg/L | 12.5% |
| Chromium, Total | E 200.7 | 0.010 mg/L | 0.0091 mg/L | 9.4% +/-RL |
| Cobalt, Total | E 200.7 | 0.0085 mg/L | 0.0075 mg/L | 12.5% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.0066 mg/L | 0.0051 mg/L | 25.6% +/-RL |
| Nickel, Total | E 200.7 | 0.012 mg/L | 0.012 mg/L | 0.0% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0024 mg/L | 0.0022 mg/L | 8.7% +/-RL |
| Vanadium, Total | E 200.7 | 0.025 mg/L | 0.026 mg/L | 3.9% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0082 mg/L | 0.0096 mg/L | 15.7% +/-RL |
| Zinc, Total | E 200.7 | 0.020 mg/L | 0.022 mg/L | 9.5% |
| Arsenic, Dissolved | E200.8 | 0.00059 mg/L | 0.00049 mg/L | 18.5% +/-RL |
| Arsenic, Total | E200.8 | 0.0021 mg/L | 0.0023 mg/L | 9.1% |
| Lead, Dissolved | E200.8 | 0.00012 mg/L | 0.00015 mg/L | 22.2% +/-RL |
| Lead, Total | E200.8 | 0.0084 mg/L | 0.0095 mg/L | 12.3% |
| Selenium, Total | E200.8 | 0.0018 mg/L | 0.0019 mg/L | 5.4% +/-RL |
| Mercury, Total | E245.1 | 0.00013 mg/L | ND (0.00020 mg/L) | DL |
| Cyanide, Total | E335.4 | 0.00964 mg/L | ND (0.00500 mg/L) | DL |
| TPH DRO | SW8015 | 0.29 mg/L | 0.27 mg/L | 7.1% |
| TPH GRO | SW8015 | 0.55 mg/L | 0.55 mg/L | 0.0% |
| 1,1,1-Trichloroethane | SW8260B | 2.3 µg/L | 2.3 µg/L | 0.0% +/-RL |
| 1,1-Dichloroethane | SW8260B | 27 µg/L | 30 µg/L | 10.5% |
| 1,1-Dichloroethene | SW8260B | 34 µg/L | 41 µg/L | 18.7% |
| 1,2-Dichloroethane | SW8260B | 12 µg/L | 12 µg/L | 0.0% |
| Benzene | SW8260B | ND (5.0 µg/L) | 1.2 µg/L | DL |
| Chloromethane | SW8260B | 3.5 µg/L | 3.4 µg/L | 2.9% +/-RL |
| cis-1,2-Dichloroethene | SW8260B | 3.2 µg/L | 3.1 µg/L | 3.2% +/-RL |
| MTBE | SW8260B | 350 µg/L | 340 µg/L | 2.9% |
| Trichloroethene | SW8260B | 5.2 µg/L | 5.1 µg/L | 1.9% +/-RL |
| 1,4-Dioxane | SW8270C | 81 µg/L | 63 µg/L | 25.0% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| HT-AN | Sample was analyzed outside of the method holding time. |
| ERP-MS | The MS/MSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| EBD | Equipment blank detection |
| FBD | Field blank detection |
| TBD | Trip blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1,1-Trichloroethane | SW8260B | MKTF-31 | 2203920-003a | 2.3 | 5.0 | µg/L | J | MDLRL |
| 1,1,1-Trichloroethane | SW8260B | DUP-3-16-22 | 2203920-008a | 2.3 | 5.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-40 | 2203920-002a | 0.85 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | Trip Blank | 2203920-009a | 0.68 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | MKTF-25 | 2203920-004a | 9.2 | 10 | µg/L | U | MDLRL, TBD |
| 1,1-Dichloroethene | SW8260B | MKTF-24 | 2203920-005a | 6.1 | 10 | µg/L | U | MDLRL, TBD |
| 1,1-Dichloroethene | SW8260B | FB 3-16-22 | 2203920-007a | 0.57 | 1.0 | µg/L | U | MDLRL, TBD |
| 1,2-Dichloroethane | SW8260B | MKTF-40 | 2203920-002a | 0.45 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-24 | 2203920-005a | 5.9 | 10 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-02R | 2203920-006c | ND | 50 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-02R | 2203920-006c | ND | 50 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-02R | 2203920-006c | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | EB 3-16-22 | 2203920-001a | 8.5 | 10 | µg/L | U | FBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2-Butanone | SW8260B | FB 3-16-22 | 2203920-007a | 5.7 | 10 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | MKTF-02R | 2203920-006c | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-02R | 2203920-006c | ND | 5.0 | µg/L | R | LR-SUR |
| Arsenic, Dissolved | E200.8 | MKTF-31 | 2203920-003E | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-25 | 2203920-004E | 0.00079 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-02R | 2203920-006E | 0.0018 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-3-16-22 | 2203920-008E | 0.00049 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-40 | 2203920-002D | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-25 | 2203920-004D | 0.0031 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-24 | 2203920-005D | 0.0030 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-02R | 2203920-006D | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| Benzene | SW8260B | DUP-3-16-22 | 2203920-008a | 1.2 | 5.0 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | EB 3-16-22 | 2203920-001a | 1.1 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-40 | 2203920-002a | 0.75 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-31 | 2203920-003a | 3.5 | 15 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-25 | 2203920-004a | 9.9 | 30 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-02R | 2203920-006a | 1.9 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB 3-16-22 | 2203920-007a | 0.84 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP-3-16-22 | 2203920-008a | 3.4 | 15 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203920-009a | 0.69 | 3.0 | µg/L | U | MBD, MDLRL |
| Chromium, Total | E 200.7 | MKTF-25 | 2203920-004D | 0.0037 | 0.0060 | mg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-31 | 2203920-003a | 3.2 | 5.0 | µg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-25 | 2203920-004a | 8.0 | 10 | µg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | DUP-3-16-22 | 2203920-008a | 3.1 | 5.0 | µg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-40 | 2203920-002E | 0.0051 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-25 | 2203920-004E | 0.0058 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-02R | 2203920-006E | 0.0041 | 0.0060 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Cobalt, Total | E 200.7 | MKTF-40 | 2203920-002D | 0.0039 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-02R | 2203920-006D | 0.0060 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-40 | 2203920-002F | 0.00839 | 0.0050 | mg/L | J | HT-AN |
| Cyanide, Total | E335.4 | MKTF-31 | 2203920-003F | 0.00964 | 0.0050 | mg/L | J | HT-AN |
| Cyanide, Total | E335.4 | MKTF-25 | 2203920-004F | 0.00896 | 0.0050 | mg/L | J | HT-AN |
| Cyanide, Total | E335.4 | EB 3-16-22 | 2203920-001F | ND | 0.0050 | mg/L | R | HT-AN |
| Cyanide, Total | E335.4 | MKTF-02R | 2203920-006F | 0.0129 | 0.0050 | mg/L | J | ERPD-MS |
| Cyanide, Total | E335.4 | MKTF-24 | 2203920-005F | ND | 0.0050 | mg/L | UJ | ERPD-MS |
| Cyanide, Total | E335.4 | DUP-3-16-22 | 2203920-008F | ND | 0.0050 | mg/L | UJ | ERPD-MS |
| Lead, Dissolved | E200.8 | MKTF-31 | 2203920-003E | 0.00012 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-25 | 2203920-004E | 0.00023 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-3-16-22 | 2203920-008E | 0.00015 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-40 | 2203920-002D | 0.0024 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-02R | 2203920-006D | 0.0012 | 0.0025 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | MKTF-40 | 2203920-002D | 0.000099 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | MKTF-31 | 2203920-003D | 0.00013 | 0.00020 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | MKTF-02R | 2203920-006a | 1.1 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-24 | 2203920-005a | 7.7 | 30 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-31 | 2203920-003E | 0.0066 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | DUP-3-16-22 | 2203920-008E | 0.0051 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-31 | 2203920-003D | 0.012 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-25 | 2203920-004D | 0.029 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-24 | 2203920-005D | 0.031 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-02R | 2203920-006D | 0.013 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | DUP-3-16-22 | 2203920-008D | 0.012 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB 3-16-22 | 2203920-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-40 | 2203920-002D | 0.0094 | 0.010 | mg/L | J- | LR-LCS, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|---------------------|
| Phenol | SW8270C | MKTF-02R | 2203920-006c | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | MKTF-25 | 2203920-004c | 4.1 | 5.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-24 | 2203920-005a | 4.6 | 10 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-25 | 2203920-004E | 0.00041 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-24 | 2203920-005E | 0.00039 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-25 | 2203920-004D | 0.0023 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-24 | 2203920-005D | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-40 | 2203920-002E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-02R | 2203920-006E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Tetrachloroethene | SW8260B | MKTF-02R | 2203920-006a | 0.36 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-31 | 2203920-003C | 0.29 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-02R | 2203920-006C | 0.24 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | DUP-3-16-22 | 2203920-008C | 0.27 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-40 | 2203920-002C | 0.058 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-31 | 2203920-003a | 0.55 | 0.25 | mg/L | J | ERPD-MS |
| TPH GRO | SW8015 | MKTF-25 | 2203920-004a | 0.97 | 0.50 | mg/L | J | ERPD-MS |
| TPH GRO | SW8015 | MKTF-24 | 2203920-005a | 12 | 0.50 | mg/L | J | ERPD-MS |
| TPH GRO | SW8015 | MKTF-02R | 2203920-006a | 0.63 | 0.050 | mg/L | J | ERPD-MS |
| TPH GRO | SW8015 | DUP-3-16-22 | 2203920-008a | 0.55 | 0.25 | mg/L | J | ERPD-MS |
| TPH GRO | SW8015 | EB 3-16-22 | 2203920-001a | 0.036 | 0.050 | mg/L | U | ERPD-MS, MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-40 | 2203920-002a | 0.038 | 0.050 | mg/L | U | ERPD-MS, MBD, MDLRL |
| Trichloroethene | SW8260B | MKTF-25 | 2203920-004a | 5.7 | 10 | µg/L | J | MDLRL |
| Trichloroethene | SW8260B | MKTF-24 | 2203920-005a | 3.2 | 10 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-40 | 2203920-002E | 0.0084 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-31 | 2203920-003E | 0.0024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-02R | 2203920-006E | 0.0032 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Dissolved | E 200.7 | DUP-3-16-22 | 2203920-008E | 0.0022 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-40 | 2203920-002D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-31 | 2203920-003D | 0.025 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-25 | 2203920-004D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-24 | 2203920-005D | 0.0067 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-02R | 2203920-006D | 0.0075 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-3-16-22 | 2203920-008D | 0.026 | 0.050 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-25 | 2203920-004a | 7.1 | 10 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-02R | 2203920-006a | 0.75 | 1.0 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-40 | 2203920-002E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-02R | 2203920-006E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-31 | 2203920-003E | 0.0082 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-25 | 2203920-004E | 0.0054 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-24 | 2203920-005E | 0.0088 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-3-16-22 | 2203920-008E | 0.0096 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-16-22 | 2203920-001E | 0.0067 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-40 | 2203920-002D | 0.0079 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-24 | 2203920-005D | 0.0076 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q1 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 03/17/2022 |
| Date Validated: 06/28/2022 | Sample End Date: 03/17/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2203989 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB 3-17-22 | 2203989-001 |
| MKTF-01R | 2203989-002 |
| MKTF-27 | 2203989-003 |
| MKTF-28 | 2203989-004 |
| MKTF-29 | 2203989-005 |
| MKTF-30 | 2203989-006 |
| FB 3-17-22 | 2203989-007 |
| DUP-3-17-22 | 2203989-008 |
| Trip Blank | 2203989-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates and Internal Standards) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|---|
| J | Estimated concentration |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Eighteen data points were rejected. The data completeness measure for this data package is calculated to be 96.67% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.

Naphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample MKTF-01R.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

E – Estimated value. *This laboratory flag was applied only to QC sample and surrogate results in the laboratory report, and qualification of sample data was not required.*

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|-------------------------------|----------------------------|-----------------|
| 200.7 | MKTF-27, DUP-3-17-22 | Total and Dissolved Metals | 5 |
| 200.8 | MKTF-27, MKTF-29, DUP-3-17-22 | Total and Dissolved Metals | 5 |
| 245.1 | MKTF-29 | Total Mercury | 5 |
| 200.7 | MKTF-01R | Total and Dissolved Barium | 10 |
| 8015 | MKTF-01R | GRO | 10 |
| 8260B | MKTF-01R | Select VOCs | 10 |
| 8260B | MKTF-01R | Benzene | 100 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.3°C and 1.7°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.3°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| <u>Method</u> | <u>Analyte</u> | <u>Batch</u> | <u>Concentration</u> |
|---------------|----------------|--------------|----------------------|
| 8015D | DRO | 66267 | 0.027 mg/L |
| 8260B | Chloromethane | R86626 | 0.68 $\mu\text{g/L}$ |
| 8015D | GRO | G86626 | 0.034 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of DRO and GRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|----------------------|
| 200.7 | Total Metals | 66643 | MKTF-01R, MKTF-27 |
| 200.7 | Dissolved Metals | A86575 | EB 3-17-22 |
| 200.7 | Dissolved Barium | A87332 | Not Prepared |
| 200.8 | Total Metals | 66341 | EB 3-17-22, MKTF-01R |
| 200.8 | Dissolved Metals | A86633 | MKTF-27 |
| 200.8 | Dissolved Metals | B86624 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 66371 | Not Prepared |
| 504.1 | EDB | 66256 | Not Prepared |
| 504.1 | EDB | 66262 | Not Prepared |
| 4500CN E | Cyanide | WG1836836 | MKTF-01R, MKTF-30 |
| 8015D | TPH DRO and MRO | 66267 | Not Prepared |
| 8015D | TPH GRO | G86626 | Not Prepared |
| 8260B | VOCs | R86626 | Not Prepared |
| 8270C | SVOCs | 66282 | Not Prepared |
| 8270C SIM | SVOCs | R86694 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

The MS and MSD recoveries for cyanide in Method 4500 CN E batch WG1836836 were outside the laboratory QC limits of 90-110% at 86.2% and 79.2%, respectively. However, the recoveries were within data validation limits of 75-125%. Validation action was not required.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exception.

The LCS recovery for total nickel in Method 200.7 batch 66643 were outside the data validation acceptance limits of 70-130% at 69%, indicating a potential low bias. Associated samples with detections for total nickel were qualified with J- flags due to possible low bias, and the associated samples with non-detections for total nickel were qualified with a UJ flag due to possible low bias.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|-------------|--------------------|------------|
| 8270C | 2-Fluorophenol | MKTF-27 | 5.18% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-27 | 10.6% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-27 | 2.12% | 18.6-129% |
| 8270C | 2-Fluorophenol | MKTF-29 | 5.56% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-29 | 18.0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-29 | 1.77% | 18.6-129% |
| 8270C | 2-Fluorophenol | DUP-3-17-22 | 3.92% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | DUP-3-17-22 | 9.97% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | DUP-3-17-22 | 1.87% | 18.6-129% |

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

The associated analytes were not detected in the listed samples. Since the recoveries for 2 of 3 surrogates in each of the identified samples were below 10%, these non-detected results were qualified as R indicating rejected results, data not usable.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 3-17-22, and one equipment blank sample, EB 3-17-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.69 µg/L |
| FB-3-17-22 | 8260B | 2-Butanone | 5.1 µg/L |
| FB-3-17-22 | 8260B | Chloromethane | 0.71 µg/L |
| EB-3-17-22 | 200.7 | Dissolved Zinc | 0.0044 mg/L |
| EB-3-17-22 | 8015D | TPH DRO | 0.021 mg/L |
| EB-3-17-22 | 8015D | TPH GRO | 0.037 mg/L |
| EB-3-17-22 | 8260B | 1,1-Dichloroethene | 0.54 µg/L |
| EB-3-17-22 | 8260B | 2-Butanone | 5.3 µg/L |

Detections of 2-butanone and dissolved zinc in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. The detection of 1,1-dichloroethene in the associated sample MKTF-30 that was greater than the reporting limit but less than 10 times the blank result was assigned a JB qualifier. Non-detections of the identified analytes in the associated samples did not require qualification.

The chloromethane, DRO, and GRO results were previously qualified due to laboratory blank contamination in batches R86626, 66267, and G86626, respectively; therefore, additional qualification due to the trip, field, and equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-3-17-22 was collected as a field duplicate of sample MKTF-27.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for total cyanide exceeded the data validation limit of 30% at 90.0%, which was evidence of poor precision. The total cyanide results were qualified as J for samples MKTF-27 and DUP-3-17-22.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1836836 | Not Associated |
| 4500CN E | Cyanide | WG1836836 | MKTF-28 |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the cyanide results for both measurements were non-detections.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-01R | Barium | 5.1 | 5.6 |
| MKTF-29 | Barium | 0.21 | 0.22 |
| MKTF-01R | Nickel | 0.024 | 0.027 |
| MKTF-27 | Nickel | 0.021 | 0.033 |
| MKTF-28 | Nickel | 0.0067 | 0.0079 |
| MKTF-29 | Nickel | 0.018 | 0.020 |
| DUP-3-17-22 | Nickel | 0.021 | 0.030 |
| DUP-3-17-22 | Selenium | 0.0034 | 0.0043 |
| EB 3-17-22 | Zinc | ND | 0.0044 |
| MKTF-29 | Zinc | ND | 0.0061 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-27
Field Duplicate Sample ID: DUP-3-17-22 | | | | |
|---|---------------|--------------------|--------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.068 mg/L | 0.068 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.073 mg/L | 0.076 mg/L | 4.0% |
| Cobalt, Total | E 200.7 | 0.015 mg/L | 0.017 mg/L | 12.5% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.033 mg/L | 0.030 mg/L | 9.5% +/-RL |
| Nickel, Total | E 200.7 | 0.021 mg/L | 0.021 mg/L | 0.0% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0011 mg/L | 0.0012 mg/L | 8.7% +/-RL |
| Arsenic, Total | E200.8 | 0.0015 mg/L | 0.0015 mg/L | 0.0% +/-RL |
| Lead, Total | E200.8 | 0.00093 mg/L | 0.0017 mg/L | 58.6% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0047 mg/L | 0.0043 mg/L | 8.9% +/-RL |
| Selenium, Total | E200.8 | 0.0062 mg/L | 0.0034 mg/L | 58.3% +/-RL |
| Cyanide, Total | E335.4 | 0.0118 mg/L | 0.0311 mg/L | 90.0% |
| TPH DRO | SW8015 | 0.36 mg/L | 0.38 mg/L | 5.4% |
| TPH GRO | SW8015 | 0.054 mg/L | 0.055 mg/L | 1.8% +/-RL |
| TPH ORO | SW8015 | 0.16 mg/L | 0.18 mg/L | 11.8% |
| 1,1-Dichloroethane | SW8260B | 0.86 µg/L | 0.89 µg/L | 3.4% +/-RL |
| 1,2-Dichloroethane | SW8260B | 0.54 µg/L | 0.54 µg/L | 0.0% +/-RL |
| Benzene | SW8260B | 1.3 µg/L | 0.49 µg/L | 90.5% +/-RL |
| Chloromethane | SW8260B | 0.72 µg/L | 0.66 µg/L | 8.7% +/-RL |
| MTBE | SW8260B | 17 µg/L | 17 µg/L | 0.0% |
| Vinyl Chloride | SW8260B | 0.46 µg/L | ND (1.0 µg/L) | DL |
| 1,4-Dioxane | SW8270C | 3.3 µg/L | 3.6 µg/L | 8.7% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for total cyanide exceeded the data validation limit of 30% at 90.0%, which was evidence of poor precision. The total cyanide results were qualified as J for samples MKTF-27 and DUP-3-17-22.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| FBD | Field blank detection |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-01R | 2203989-002a | 5.5 | 10 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-27 | 2203989-003a | 0.86 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-29 | 2203989-005a | 0.63 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-3-17-22 | 2203989-008a | 0.89 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | MKTF-30 | 2203989-006a | 1.3 | 1.0 | µg/L | JB | EBD |
| 1,1-Dichloroethene | SW8260B | EB 3-17-22 | 2203989-001a | 0.54 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-01R | 2203989-002a | 5.1 | 10 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-27 | 2203989-003a | 0.54 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-28 | 2203989-004a | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-3-17-22 | 2203989-008a | 0.54 | 1.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2,4-Dimethylphenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-01R | 2203989-002c | 4.0 | 5.0 | µg/L | J | MDLRL |
| 2,4-Dinitrophenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | EB 3-17-22 | 2203989-001a | 5.3 | 10 | µg/L | U | FBD, MDLRL |
| 2-Butanone | SW8260B | FB 3-17-22 | 2203989-007a | 5.1 | 10 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-01R | 2203989-002c | 3.7 | 5.0 | µg/L | J | MDLRL |
| 3,4-Methylphenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| Arsenic, Dissolved | E200.8 | MKTF-27 | 2203989-003E | 0.0011 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-28 | 2203989-004E | 0.00090 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-29 | 2203989-005E | 0.00073 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-30 | 2203989-006E | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-3-17-22 | 2203989-008E | 0.0012 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-27 | 2203989-003D | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-3-17-22 | 2203989-008D | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-28 | 2203989-004a | 0.30 | 1.0 | µg/L | J | MDLRL |
| Benzene | SW8260B | DUP-3-17-22 | 2203989-008a | 0.49 | 1.0 | µg/L | J | MDLRL |
| Chloroform | SW8260B | MKTF-01R | 2203989-002a | 5.7 | 10 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | MKTF-27 | 2203989-003a | 0.72 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-28 | 2203989-004a | 0.70 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | MKTF-29 | 2203989-005a | 0.91 | 3.0 | µg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Chloromethane | SW8260B | MKTF-30 | 2203989-006a | 0.65 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | FB 3-17-22 | 2203989-007a | 0.71 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | DUP-3-17-22 | 2203989-008a | 0.66 | 3.0 | µg/L | U | MBD, MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2203989-009a | 0.69 | 3.0 | µg/L | U | MBD, MDLRL |
| Chromium, Total | E 200.7 | MKTF-30 | 2203989-006D | 0.0027 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-01R | 2203989-002E | 0.003 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | MKTF-29 | 2203989-005E | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-01R | 2203989-002D | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-27 | 2203989-003D | 0.015 | 0.030 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-28 | 2203989-004D | 0.0057 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-29 | 2203989-005D | 0.0059 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-30 | 2203989-006D | 0.0041 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | DUP-3-17-22 | 2203989-008D | 0.017 | 0.030 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-27 | 2203989-003F | 0.0118 | 0.0050 | mg/L | J | ERPD-FD |
| Cyanide, Total | E335.4 | DUP-3-17-22 | 2203989-008F | 0.0311 | 0.0050 | mg/L | J | ERPD-FD |
| Lead, Dissolved | E200.8 | MKTF-30 | 2203989-006E | 0.000072 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-27 | 2203989-003D | 0.00093 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-3-17-22 | 2203989-008D | 0.0017 | 0.0025 | mg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-28 | 2203989-004a | 0.53 | 1.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-01R | 2203989-002a | 11 | 30 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-27 | 2203989-003E | 0.033 | 0.050 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-28 | 2203989-004E | 0.0079 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | DUP-3-17-22 | 2203989-008E | 0.030 | 0.050 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-01R | 2203989-002D | 0.024 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-29 | 2203989-005D | 0.018 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-30 | 2203989-006D | 0.017 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB 3-17-22 | 2203989-001D | ND | 0.010 | mg/L | UJ | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Nickel, Total | E 200.7 | MKTF-27 | 2203989-003D | 0.021 | 0.050 | mg/L | J- | LR-LCS, MDLRL |
| Nickel, Total | E 200.7 | MKTF-28 | 2203989-004D | 0.0067 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| Nickel, Total | E 200.7 | DUP-3-17-22 | 2203989-008D | 0.021 | 0.050 | mg/L | J- | LR-LCS, MDLRL |
| Phenol | SW8270C | MKTF-27 | 2203989-003c | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | MKTF-29 | 2203989-005c | ND | 5.0 | µg/L | R | LR-SUR |
| Phenol | SW8270C | DUP-3-17-22 | 2203989-008c | ND | 5.0 | µg/L | R | LR-SUR |
| p-Isopropyltoluene | SW8260B | MKTF-01R | 2203989-002a | 2.7 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-01R | 2203989-002a | 4.2 | 10 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-01R | 2203989-002E | 0.00038 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-27 | 2203989-003E | 0.0047 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-28 | 2203989-004E | 0.00068 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP-3-17-22 | 2203989-008E | 0.0043 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-01R | 2203989-002D | 0.00075 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-29 | 2203989-005D | 0.00069 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-3-17-22 | 2203989-008D | 0.0034 | 0.00500 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-29 | 2203989-005E | 0.0017 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | MKTF-29 | 2203989-005D | 0.0019 | 0.005 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-28 | 2203989-004C | 0.17 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-30 | 2203989-006C | 0.13 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB 3-17-22 | 2203989-001C | 0.021 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-27 | 2203989-003a | 0.054 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | MKTF-29 | 2203989-005a | 0.058 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | MKTF-30 | 2203989-006a | 0.066 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | DUP-3-17-22 | 2203989-008a | 0.055 | 0.050 | mg/L | JB | MBD |
| TPH GRO | SW8015 | EB 3-17-22 | 2203989-001a | 0.037 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-28 | 2203989-004a | 0.039 | 0.050 | mg/L | U | MBD, MDLRL |
| TPH ORO | SW8015 | MKTF-28 | 2203989-004C | 0.056 | 0.080 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Trichloroethene | SW8260B | MKTF-01R | 2203989-002a | 3.0 | 10 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-28 | 2203989-004E | 0.0027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-29 | 2203989-005E | 0.0034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-30 | 2203989-006E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-01R | 2203989-002D | 0.0054 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-28 | 2203989-004D | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-29 | 2203989-005D | 0.0044 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-30 | 2203989-006D | 0.014 | 0.050 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-27 | 2203989-003a | 0.46 | 1.0 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-29 | 2203989-005a | 0.44 | 1.0 | µg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-30 | 2203989-006a | 0.46 | 1.0 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-01R | 2203989-002E | 0.0077 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-28 | 2203989-004E | 0.0059 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-29 | 2203989-005E | 0.0061 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-30 | 2203989-006E | 0.0082 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB 3-17-22 | 2203989-001E | 0.0044 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-30 | 2203989-006D | 0.0082 | 0.010 | mg/L | J | MDLRL |





Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix D-2. 2nd Quarter Data Validation Reports



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Aqueous |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/21/2022 |
| Date Validated: 09/19/2022 | Sample End Date: 06/21/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206B30 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-21-22 | 2206B30-001 |
| MKTF-46 | 2206B30-002 |
| MKTF-18R | 2206B30-003 |
| MKTF-35 | 2206B30-004 |
| MKTF-38 | 2206B30-005 |
| MKTF-11 | 2206B30-006 |
| MKTF-16 | 2206B30-007 |
| FB-6-21-22 | 2206B30-008 |
| DUP-6-21-22 | 2206B30-009 |
| Trip Blank | 2206B30-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 628 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C: Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270 SIM, depending which method needs the least dilution. In this report naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM for sample MKTF-18R. Naphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM for sample MKTF-35.

Method 4500CN E: For samples MKTF-18R, MKTF-38, and MKTF-16, analyses were performed from improper containers.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

P – Sample pH not in range.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|----------------------------|-----------------------------------|-----------------|
| 200.7 | Multiple Samples | Total and/or Dissolved Barium | 2 |
| 200.8 | MKTF-35, MKTF-11, MKTF-16 | Select Total and Dissolved Metals | 5 |
| 8015D | MKTF-18R, MKTF-35, MKTF-11 | TPH GRO | 10 |
| 8260B | MKTF-18R, MKTF-11 | Select VOCs | 10 |
| 8260B | MKTF-35 | VOCs | 20 |
| 8260B | MKTF-18R, MKTF-11 | Benzene | 100 |
| 200.7 | MKTF-35 | Total Barium | 100 |
| 8260B | MKTF-35 | Benzene and Toluene | 200 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.4°C and 5.3°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.1°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> <p>A preserved vial was submitted for the Method 8015D GRO analysis for sample MKTF-18R but the pH at the time of analysis was greater than two. Following EPA defined actions, the holding time for this sample was reduced from 14 days to 7 days from sampling to analysis.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific and reduced holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 68348 at a concentration of 0.021 mg/L. TPH DRO was detected in sample EB-6-21-22 at a concentration less than the laboratory reporting limit and the result was qualified with a U flag. The TPH DRO results for sample DUP-6-21-22 and sample MKTF-46 that were greater than the blank detection and the laboratory reporting limit but less than 10 times the blank concentration were qualified with JB flags. Detections of this analyte in the associated samples greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 68353 | Not Prepared |
| 200.7 | Dissolved Metals | A88979 | Not Prepared |
| 200.7 | Dissolved Metals | B88979 | DUP-6-21-22 |
| 200.8 | Total Metals | 68353 | Not Prepared |
| 200.8 | Dissolved Metals | A88981 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68333 | Not Prepared |
| 504.1 | EDB | 68319 | Not Prepared |
| 4500CN E | Cyanide | WG1886404 | MKTF-35 |
| 8015D | TPH DRO and MRO | 68348 | Not Prepared |
| 8015D | TPH GRO | A89029 | Not Prepared |
| 8260B | Benzene | A89138 | Not Prepared |
| 8260B | VOCs | R89107 | Not Prepared |
| 8260B | VOCs | W89041 | MKTF-46 |
| 8270C and 8270C SIM | SVOCs | 68332 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|----------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 68353 | 53.6% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 68353 | 131% | ----- | 70-130% | ----- | ----- |
| 504.1 | EDB | 68319 | Acceptable | Acceptable | 70-130% | 21.9% | 20% |
| 8015D | TPH DRO | 68348 | 81.2% | 89.2% | 31.7-75.4% | Acceptable | 20% |
| 8270C SIM | 1,4-Dioxane | 68332 | 53.0% | 55.0% | 20.2-48.4% | Acceptable | 30.1% |
| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
| 8270C SIM | Acenaphthene | 68332 | Acceptable | 83.0% | 29.8-82.7% | Acceptable | 27.8% |
| 8270C SIM | Phenanthrene | 68332 | Acceptable | 94.0% | 38.2-93.9% | Acceptable | 27.9% |

Total nickel results were qualified as J- if detected and UJ if not detected in the associated samples due to evidence of potential low bias.

Analytes with LCS and/or LCSD recoveries greater than the laboratory or data validation QC limits were detected in associated samples and the results were qualified as J+ to indicate estimated concentrations that may be biased high. Non-detections of these analytes in the associated samples did not require qualification.

EDB was not detected in the associated samples and the results were qualified UJ due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270C and Method 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples MKTF-46 and MKTF-35 Method 8270C analyses.

The Method 8015D surrogate BFB was recovered in sample MKTF-35 outside the acceptance limits of 70-130% at 151%. The target analyte, TPH GRO, associated with this surrogate was detected in sample MKTF-35, and the result was assigned a J+ qualifier due to evidence of potential high bias.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-21-22, and one equipment blank sample, EB 6-21-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| FB-6-21-22 | 8260B | Acetone | 3.6 µg/L |
| EB-6-21-22 | 8260B | Acetone | 3.2 µg/L |
| EB-6-21-22 | 8260B | Methylene Chloride | 0.80 µg/L |
| EB-6-21-22 | 8015D | TPH DRO | 0.041 mg/L |
| EB-6-21-22 | 200.7 | Dissolved Zinc | 0.0075 mg/L |

Detections of acetone and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank result were assigned JB qualifiers. Non-detections of these analytes in the associated samples did not require qualification.

The TPH DRO results in batch 68348 were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-21-22 was collected as a field duplicate of sample MKTF-46.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for TPH DRO exceeded the data validation limit of 30% at 96.3%, which was evidence of poor precision. The TPH DRO results were qualified as J for samples MKTF-46 and DUP-6-21-22.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1886404 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-35 | Antimony | ND | 0.00076 |
| MKTF-16 | Antimony | ND | 0.00070 |
| MKTF-18R | Arsenic | 0.0065 | 0.0085 |
| MKTF-11 | Nickel | 0.022 | 0.025 |
| MKTF-46 | Silver | ND | 0.0032 |
| MKTF-18R | Silver | ND | 0.0016 |
| MKTF-35 | Silver | ND | 0.0028 |
| MKTF-38 | Silver | ND | 0.0027 |
| MKTF-11 | Silver | ND | 0.0029 |
| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
| DUP-6-21-22 | Silver | ND | 0.0034 |
| MKTF-11 | Vanadium | ND | 0.0030 |
| EB-6-21-22 | Zinc | ND | 0.0075 |
| MKTF-46 | Zinc | 0.0048 | 0.0084 |
| MKTF-18R | Zinc | 0.0044 | 0.0099 |
| DUP-6-21-22 | Zinc | 0.0040 | 0.0071 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-46
Field Duplicate Sample ID: DUP-6-21-22 | | | | |
|---|---------------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| 1,4-Dioxane | SW8270C | 1.5 µg/L | 1.7 µg/L | 12.5% +/-RL |
| Phenanthrene | SW8270C | 0.22 µg/L | ND (0.30 µg/L) | DL |
| TPH GRO | SW8015 | 0.016 mg/L | ND (0.050 mg/L) | DL |
| TPH DRO | SW8015 | 0.070 mg/L | 0.20 mg/L | 96.3% |
| Barium, Dissolved | E 200.7 | 0.037 mg/L | 0.037 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.080 mg/L | 0.080 mg/L | 0.0% |
| Chromium, Total | E 200.7 | 0.0021 mg/L | 0.0023 mg/L | 9.1% +/-RL |
| Silver, Dissolved | E 200.7 | 0.0032 mg/L | 0.0034 mg/L | 6.1% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0040 mg/L | 0.0042 mg/L | 4.9% +/-RL |
| Vanadium, Total | E 200.7 | 0.0040 mg/L | 0.0044 mg/L | 9.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0084 mg/L | 0.0071 mg/L | 16.8% +/-RL |
| Zinc, Total | E 200.7 | 0.0048 mg/L | 0.0040 mg/L | 18.2% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.00066 mg/L | 0.00062 mg/L | 6.3% +/-RL |
| Arsenic, Total | E200.8 | 0.00086 mg/L | 0.00078 mg/L | 9.8% +/-RL |
| Lead, Total | E200.8 | 0.0014 mg/L | 0.0014 mg/L | 0.0% |
| Selenium, Total | E200.8 | 0.00045 mg/L | 0.00051 mg/L | 12.5% +/-RL |
| Mercury, Total | E245.1 | 0.00013 mg/L | 0.00013 mg/L | 0.0% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for TPH DRO exceeded the data validation limit of 30% at 96.3%, which was evidence of poor precision. The TPH DRO results were qualified as J for samples MKTF-46 and DUP-6-21-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| EBD | Equipment blank detection |
| FBD | Field blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 1,1,1-Trichloroethane | SW8260B | MKTF-16 | 2206b30-007a | 0.95 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | MKTF-38 | 2206b30-005a | 0.31 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dibromoethane | E504.1 | EB-6-21-22 | 2206B30-001B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-46 | 2206B30-002B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-18R | 2206B30-003B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-35 | 2206B30-004B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-38 | 2206B30-005B | ND | 0.0095 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-11 | 2206B30-006B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-16 | 2206B30-007B | ND | 0.0095 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | DUP-6-21-22 | 2206B30-009B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-46 | 2206b30-002c | 1.5 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-18R | 2206B30-003C | 13 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-35 | 2206B30-004C | 2.0 | 1.0 | µg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | MKTF-38 | 2206b30-005c | 3.6 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-11 | 2206b30-006c | 6.6 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-16 | 2206b30-007c | 1.4 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | DUP-6-21-22 | 2206b30-009c | 1.7 | 1.0 | µg/L | J+ | HR-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-16 | 2206b30-007c | 0.16 | 0.3 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | MKTF-18R | 2206b30-003c | 7.3 | 10 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | MKTF-18R | 2206B30-003C | 6.3 | 0.30 | µg/L | J+ | HR-LCS |
| Acenaphthene | SW8270C | MKTF-35 | 2206B30-004C | 1.6 | 0.30 | µg/L | J+ | HR-LCS |
| Acenaphthene | SW8270C | MKTF-11 | 2206b30-006c | 0.44 | 0.30 | µg/L | J+ | HR-LCS |
| Acetone | SW8260B | EB-6-21-22 | 2206b30-001a | 3.2 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | MKTF-38 | 2206b30-005a | 5.4 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | MKTF-16 | 2206b30-007a | 4.0 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | FB-6-21-22 | 2206b30-008a | 3.6 | 10 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-35 | 2206B30-004E | 0.00076 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-16 | 2206B30-007E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-46 | 2206B30-002E | 0.00066 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-21-22 | 2206B30-009E | 0.00062 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-46 | 2206B30-002D | 0.00086 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-21-22 | 2206B30-009D | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | MKTF-18R | 2206B30-003C | 0.16 | 0.30 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-46 | 2206B30-002D | 0.0021 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-18R | 2206B30-003D | 0.0028 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-6-21-22 | 2206B30-009D | 0.0023 | 0.0060 | mg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-18R | 2206b30-003a | 5.7 | 10 | ug/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-18R | 2206B30-003D | 0.0051 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-11 | 2206B30-006D | 0.0049 | 0.0060 | mg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-18R | 2206b30-003a | 5.0 | 10 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Isopropylbenzene | SW8260B | MKTF-16 | 2206b30-007a | 0.48 | 1.0 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-35 | 2206B30-004E | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-38 | 2206B30-005E | 0.0001 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-16 | 2206B30-007E | 0.00017 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | MKTF-46 | 2206B30-002D | 0.00013 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | DUP-6-21-22 | 2206B30-009D | 0.00013 | 0.00020 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | EB-6-21-22 | 2206b30-001a | 0.80 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-18R | 2206b30-003a | 3.7 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-35 | 2206b30-004a | 8.0 | 60 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-18R | 2206B30-003E | 0.0062 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-38 | 2206B30-005E | 0.0059 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-16 | 2206B30-007E | 0.0054 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-35 | 2206B30-004D | 0.066 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-38 | 2206B30-005D | 0.011 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-11 | 2206B30-006D | 0.022 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-16 | 2206B30-007D | 0.032 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-6-21-22 | 2206B30-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-46 | 2206B30-002D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | DUP-6-21-22 | 2206B30-009D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-18R | 2206B30-003D | 0.0079 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| n-Propylbenzene | SW8260B | MKTF-18R | 2206b30-003a | 5.6 | 10 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | MKTF-18R | 2206B30-003C | 6.7 | 0.30 | µg/L | J+ | HR-LCS |
| Phenanthrene | SW8270C | MKTF-35 | 2206B30-004C | 0.38 | 0.30 | µg/L | J+ | HR-LCS |
| Phenanthrene | SW8270C | MKTF-11 | 2206b30-006c | 0.38 | 0.30 | µg/L | J+ | HR-LCS |
| Phenanthrene | SW8270C | MKTF-46 | 2206b30-002c | 0.22 | 0.30 | µg/L | J+ | HR-LCS, MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-18R | 2206b30-003a | 2.7 | 10 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-35 | 2206b30-004a | 6.1 | 20 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|----------------------|
| sec-Butylbenzene | SW8260B | MKTF-18R | 2206b30-003a | 2.6 | 10 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-35 | 2206b30-004a | 5.4 | 20 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-11 | 2206b30-006a | 5.7 | 10 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-16 | 2206B30-007E | 0.00049 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-35 | 2206B30-004D | 0.018 | 0.0050 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | MKTF-38 | 2206B30-005D | 0.0035 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | MKTF-16 | 2206B30-007D | 0.0058 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | MKTF-46 | 2206B30-002D | 0.00045 | 0.0010 | mg/L | J+ | HR-LCS, MDLRL |
| Selenium, Total | E200.8 | MKTF-18R | 2206B30-003D | 0.00075 | 0.0010 | mg/L | J+ | HR-LCS, MDLRL |
| Selenium, Total | E200.8 | MKTF-11 | 2206B30-006D | 0.00047 | 0.0010 | mg/L | J+ | HR-LCS, MDLRL |
| Selenium, Total | E200.8 | DUP-6-21-22 | 2206B30-009D | 0.00051 | 0.0010 | mg/L | J+ | HR-LCS, MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-46 | 2206B30-002E | 0.0032 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-18R | 2206B30-003E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-35 | 2206B30-004E | 0.0028 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-38 | 2206B30-005E | 0.0027 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-11 | 2206B30-006E | 0.0029 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP-6-21-22 | 2206B30-009E | 0.0034 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-18R | 2206B30-003C | 3.5 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-35 | 2206B30-004C | 3.2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-38 | 2206B30-005C | 0.22 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-11 | 2206B30-006C | 1.3 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | EB-6-21-22 | 2206B30-001C | 0.041 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-46 | 2206B30-002C | 0.07 | 0.064 | mg/L | JB | ERPD-FD, HR-LCS, MBD |
| TPH DRO | SW8015 | DUP-6-21-22 | 2206B30-009C | 0.20 | 0.064 | mg/L | JB | ERPD-FD, HR-LCS, MBD |
| TPH GRO | SW8015 | MKTF-35 | 2206b30-004a | 64 | 0.50 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-46 | 2206b30-002a | 0.016 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | MKTF-38 | 2206b30-005a | 0.034 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Trichloroethene | SW8260B | MKTF-38 | 2206b30-005a | 0.47 | 1.0 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-46 | 2206B30-002E | 0.0040 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-18R | 2206B30-003E | 0.0024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-35 | 2206B30-004E | 0.0029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-38 | 2206B30-005E | 0.0039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-11 | 2206B30-006E | 0.0030 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-16 | 2206B30-007E | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-21-22 | 2206B30-009E | 0.0042 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-46 | 2206B30-002D | 0.004 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-18R | 2206B30-003D | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-38 | 2206B30-005D | 0.026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-21-22 | 2206B30-009D | 0.0044 | 0.050 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | MKTF-16 | 2206b30-007a | 0.93 | 1.0 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-35 | 2206B30-004E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-38 | 2206B30-005E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-11 | 2206B30-006E | 0.018 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-16 | 2206B30-007E | 0.034 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-46 | 2206B30-002E | 0.0084 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-18R | 2206B30-003E | 0.0099 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-21-22 | 2206B30-009E | 0.0071 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-21-22 | 2206B30-001E | 0.0075 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-46 | 2206B30-002D | 0.0048 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-18R | 2206B30-003D | 0.0044 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-21-22 | 2206B30-009D | 0.0040 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/22/2022 |
| Date Validated: 12/22/2022 | Sample End Date: 06/22/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206C26 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-22-22 | 2206C26-001 |
| MKTF-40 | 2206C26-002 |
| MKTF-31 | 2206C26-003 |
| FB-6-22-22 | 2206C26-004 |
| DUP-6-22-22 | 2206c26-005 |
| Trip Blank | 2206c26-006 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 270 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? Yes

Comments: The laboratory did not report non-conformances related to the analytical data for this sample set.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

E – Estimated value. **The target analyte 1,4-dioxane was flagged by the laboratory with the E flag for sample MKTF-31. This result was assigned a J qualifier to indicate an estimated concentration.**

J – Analyte detected below quantitation limits

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD is outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|----------------------|----------------------------|-----------------|
| 8260B | MKTF-31 | VOCs | 2 |
| 200.8 | MKTF-40, DUP-6-22-22 | Dissolved and Total Metals | 5 |
| 8260B | MKTF-31 | MTBE | 10 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.9°C and 1.1°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.5°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.

TPH DRO was detected in the laboratory blank for Method 8015D batch 68348 at a concentration of 0.021 mg/L. TPH DRO results in the associated samples (EB-6-22-22 and MKTF-40) that were less than the laboratory reporting limit were assigned U qualifiers. The TPH DRO result for sample MKTF-31 that was greater than the laboratory reporting limit but less than or equal to 10 times the blank concentration was assigned a JB qualifier. The TPH DRO result in the associated sample DUP-6-22-22 was greater than ten times the blank concentration and did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|--------|------------------|--------|------------------|
| 200.7 | Total Metals | 68353 | DUP-6-22-22 |
| 200.7 | Dissolved Metals | B88979 | Not Prepared |
| 200.8 | Total Metals | 68353 | Not Prepared |
| 200.8 | Dissolved Metals | B89062 | Not Prepared |
| 200.8 | Dissolved Metals | C89140 | Not Prepared |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|------------------|
| 245.1 | Total and Dissolved Mercury | 68334 | EB-6-22-22 |
| 504.1 | EDB | 68319 | DUP-6-22-22 |
| 4500CN E | Cyanide | WG1888356 | Not Associated |
| 4500CN E | Cyanide | WG1888360 | Not Associated |
| 8015D | TPH DRO and MRO | 68348 | Not Prepared |
| 8015D | GRO | A89029 | Not Prepared |
| 8260B | VOC | A89211 | Not Prepared |
| 8260B | VOC | R89156 | MKTF-40 |
| 8270C SIM | SVOC | 68332 | Not Prepared |
| 8270C | SVOC | 68332 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|----------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 68353 | 53.6% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 68353 | 131% | ----- | 70-130% | ----- | ----- |
| 8011 | EDB | 68319 | Acceptable | Acceptable | 70-130% | 21.9% | 20% |
| 8015D | TPH DRO | 68348 | 81.2% | 89.2% | 31.7-75.4% | Acceptable | 20% |
| 8270C SIM | 1,4-Dioxane | 68332 | 53.0% | 55.0% | 20.2-48.4% | Acceptable | 30.1% |
| 8270C SIM | Acenaphthene | 68332 | Acceptable | 83.0% | 29.8-82.7% | Acceptable | 27.8% |
| 8270C SIM | Phenanthrene | 68332 | Acceptable | 94.0% | 38.2-93.9% | Acceptable | 27.9% |

Detections of total nickel in the associated samples were qualified as J- and non-detected total nickel results were qualified as UJ due to evidence of low bias.

Detections of the identified analytes in the associated samples with LCS and/or LCSD percent recoveries that were greater than the upper laboratory QC limits were qualified as J+ due to evidence of potential high bias. Non-detection of these analytes in the associated samples did not require qualification.

EDB was not detected in the associated samples, and the results were assigned UJ qualifiers due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample EB-6-22-22, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-22-22, and one equipment blank sample, EB-6-22-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|--------------------|----------------------|
| FB-6-22-22 | 8260B | Acetone | 5.7 µg/L |
| EB-6-22-22 | 200.7 | Dissolved Vanadium | 0.0021 mg/L |
| EB-6-22-22 | 200.7 | Dissolved Zinc | 0.0066 mg/L |
| EB-6-22-22 | 8015 | TPH DRO | 0.023 mg/L |
| EB-6-22-22 | 8260B | Acetone | 5.30 µg/L |

Detections of acetone, dissolved vanadium, and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. The detections of dissolved zinc in the associated samples DUP-6-22-22 and MKTF-40 that were greater than the reporting limit but less than 10 times the blank result were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 68348 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-6-22-22 was collected as a field duplicate of sample MKTF-40.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for TPH DRO greatly exceeded the data validation limit of 30% at 163.6%. The reported results for TPH DRO were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for TPH DRO in the associated samples due to evidence of extremely poor precision (RPD > 100%).

An RPD value could not be calculated for TPH ORO for the field duplicate pair MKTF-40 and DUP-6-22-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, TPH ORO was qualified as J and UJ for the duplicate and parent samples, respectively.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1888356 | Not Associated |
| 4500CN E | Cyanide | WG1888360 | Not Associated |

Not Associated – The duplicate sample source was not associated with this project.

The RPD values for laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-40 | Nickel | 0.0093 | 0.013 |
| DUP-6-22-22 | Nickel | 0.010 | 0.011 |
| MKTF-40 | Silver | ND | 0.0056 |
| MKTF-31 | Silver | ND | 0.0016 |
| DUP-6-22-22 | Silver | ND | 0.0060 |
| EB-6-22-22 | Vanadium | ND | 0.0021 |
| EB-6-22-22 | Zinc | ND | 0.0066 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-40
Field Duplicate Sample ID: DUP-6-22-22 | | | | |
|---|---------------|------------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.047 mg/L | 0.050 mg/L | 6.2% |
| Barium, Total | E 200.7 | 0.29 mg/L | 0.26 mg/L | 10.9% |
| Chromium, Total | E 200.7 | 0.0048 mg/L | 0.0032 mg/L | 40.0% +/-RL |
| Cobalt, Total | E 200.7 | 0.0057 mg/L | 0.0076 mg/L | 28.6% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.013 mg/L | 0.011 mg/L | 16.7% +/-RL |
| Nickel, Total | E 200.7 | 0.0093 mg/L | 0.010 mg/L | 7.3% +/-RL |
| Silver, Dissolved | E 200.7 | 0.0056 mg/L | 0.0060 mg/L | 6.9% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.013 mg/L | 0.013 mg/L | 0.0% +/-RL |
| Vanadium, Total | E 200.7 | 0.027 mg/L | 0.025 mg/L | 7.7% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.018 mg/L | 0.013 mg/L | 32.3% +/-RL |
| Zinc, Total | E 200.7 | 0.024 mg/L | 0.019 mg/L | 23.3% |
| Arsenic, Dissolved | E200.8 | 0.00092 mg/L | 0.00080 mg/L | 14.0% +/-RL |
| Arsenic, Total | E200.8 | 0.0024 mg/L | 0.0017 mg/L | 34.1% +/-RL |
| Lead, Total | E200.8 | 0.012 mg/L | 0.0099 mg/L | 19.2% |
| Cyanide, Total | E335.4 | 0.0128 mg/L | 0.0129 mg/L | 0.8% |
| TPH DRO | SW8015 | 0.053 mg/L | 0.53 mg/L | 163.6% |
| TPH ORO | SW8015 | ND (0.080 mg/L) | 1.1 mg/L | DL |
| 1,1-Dichloroethane | SW8260B | 0.80 µg/L | 0.97 µg/L | 19.2% +/-RL |
| MTBE | SW8260B | 1.3 µg/L | 1.4 µg/L | 7.4% +/-RL |
| 1,4-Dioxane | SW8270C | 11 µg/L | 11 µg/L | 0.0% |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for TPH DRO greatly exceeded the data validation limit of 30% at 163.6%. The reported results for TPH DRO were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for TPH DRO in the associated samples due to evidence of extremely poor precision (RPD > 100%).

An RPD value could not be calculated for TPH ORO for the field duplicate pair MKTF-40 and DUP-6-22-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, TPH ORO was qualified as J and UJ for the duplicate and parent samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ECAL | The result exceeds the calibration range. |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,1,1-Trichloroethane | SW8260B | MKTF-31 | 2206C26-003a | 2.0 | 2.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-40 | 2206C26-002a | 0.80 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-6-22-22 | 2206c26-005a | 0.97 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dibromoethane | E504.1 | EB-6-22-22 | 2206C26-001B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-40 | 2206C26-002B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-31 | 2206C26-003B | ND | 0.0095 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | DUP-6-22-22 | 2206C26-005B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-40 | 2206c26-002c | 11 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | DUP-6-22-22 | 2206c26-005c | 11 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-31 | 2206c26-003c | 79 | 1.0 | µg/L | J+ | ECAL, HR-LCS |
| Acetone | SW8260B | EB-6-22-22 | 2206C26-001a | 5.3 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | FB-6-22-22 | 2206C26-004a | 5.7 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-40 | 2206C26-002E | 0.00092 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------------------|
| Arsenic, Dissolved | E200.8 | MKTF-31 | 2206C26-003E | 0.00064 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-22-22 | 2206C26-005E | 0.0008 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-40 | 2206C26-002D | 0.0024 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-22-22 | 2206C26-005D | 0.0017 | 0.0050 | mg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-31 | 2206C26-003a | 0.51 | 2.0 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-40 | 2206C26-002D | 0.0048 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-6-22-22 | 2206C26-005D | 0.0032 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-40 | 2206C26-002D | 0.0057 | 0.0060 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-31 | 2206C26-003E | 0.000088 | 0.00050 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-31 | 2206C26-003E | 0.0058 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-31 | 2206C26-003D | 0.016 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-6-22-22 | 2206C26-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-40 | 2206C26-002D | 0.0093 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| Nickel, Total | E 200.7 | DUP-6-22-22 | 2206C26-005D | 0.010 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Total | E200.8 | MKTF-31 | 2206C26-003D | 0.0022 | 0.0010 | mg/L | J+ | HR-LCS |
| Silver, Dissolved | E 200.7 | MKTF-31 | 2206C26-003E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | DUP-6-22-22 | 2206C26-005C | 0.53 | 0.0640 | mg/L | J+ | ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | MKTF-31 | 2206C26-003C | 0.21 | 0.064 | mg/L | JB | MBD, ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | EB-6-22-22 | 2206C26-001C | 0.023 | 0.064 | mg/L | J+ | ERPD-FD, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-40 | 2206C26-002C | 0.053 | 0.064 | mg/L | U | MBD, ERPD-FD, HR-LCS, MDLRL |
| TPH ORO | SW8015 | DUP-6-22-22 | 2206C26-005C | 1.1 | 0.080 | mg/L | J | ERPD-FD |
| TPH ORO | SW8015 | MKTF-40 | 2206C26-002C | ND | 0.080 | mg/L | UJ | ERPD-FD |
| Vanadium, Dissolved | E 200.7 | MKTF-40 | 2206C26-002E | 0.013 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-31 | 2206C26-003E | 0.0067 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-22-22 | 2206C26-005E | 0.013 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-6-22-22 | 2206C26-001E | 0.0021 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Total | E 200.7 | MKTF-40 | 2206C26-002D | 0.027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-31 | 2206C26-003D | 0.036 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-22-22 | 2206C26-005D | 0.025 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-40 | 2206C26-002E | 0.018 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-6-22-22 | 2206C26-005E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-31 | 2206C26-003E | 0.0079 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-22-22 | 2206C26-001E | 0.0066 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task 0006 | Sample Start Date: 06/24/2022 |
| Date Validated: 10/03/2022 | Sample End Date: 06/24/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270 with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Chemical Oxygen Demand (COD) by EPA Method 410.4 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Biochemical Oxygen Demand (BOD) by SM Method 5210B ▪ E. Coli by SM Method 9223B | |
| Laboratory Project ID: 2026E09 | |
| Data Validator: Kyle Power, Environmental Chemist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blank
- Field blank
- Equipment blank

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-24-22 | 2206E09-001 |
| MKTF-27 | 2206E09-002 |
| MKTF-28 | 2206E09-003 |
| NAPIS-2 | 2206E09-004 |
| NAPIS-3 | 2206E09-005 |
| KA-3 | 2206E09-006 |
| STP-1 to EP-2 | 2206E09-007 |
| EP-2 | 2206E09-008 |
| EP-6 | 2206E09-009 |
| FB-6-24-22 | 2206E09-010 |
| DUP-6-24-22 | 2206E09-011 |
| Trip Blank | 2206E09-012 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicate (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 819 data points. The data completeness calculation does not include any submitted blank sample results. One data point was rejected. The data completeness measure for this data package is calculated to be 99.88% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | Yes |
| Comments: The laboratory did not identify non-conformances regarding the analytical data. | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No |
| Comments: The laboratory used the following data qualification flags with this data set.
D – Sample diluted due to matrix
J – Analyte detected below quantitation limits
J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1 – RPD value not applicable for sample concentrations less than 5 times the RL.
R – RPD outside of range
S – % Recovery outside of range due to dilution or matrix interference.
* – Value exceeds maximum contaminant level. | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times. | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| Comments: The detection limits appeared to be acceptable. The following dilutions were applied.
<u>Method 8260B</u> : Dilutions of 2 to 20 times were applied for the VOC analyses of select samples.
<u>Methods 8270C/8270 SIM</u> : Dilutions of 10 times were applied for the SVOC analyses of samples STP-1 to EP-2, EP-2, and EP-6.
<u>Method 200.7</u> : Dilutions of 5 and 10 times were applied for the total and dissolved metals analysis of samples NAPIS-2, NAPIS-3, and EP-6.
<u>Method 200.8</u> : Dilutions of 5 to 100 times were applied for the metals analyses of select samples.
<u>Method 245.1</u> : A dilution of 5 times was applied for the mercury analysis of sample KA-3.
<u>Method 410.4</u> : A dilution of 5 times was applied for the COD analysis of sample EP-6.
<u>SM 9223B</u> : Dilutions of 10 times were applied for the E. coli analysis of samples NAPIS-2, NAPIS-3, and EP-6. | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | Yes |
| Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC. | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of 4°C ± 2°C between 0.8°C and 5.3°C as noted on the <i>Sample Log-In Check List</i> and CoC. The cooler temperatures below 2°C were judged as acceptable since the samples were not reported to be frozen upon receipt at the laboratory, and the sample containers were reported to be intact. | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |



VALIDATION CRITERIA CHECKLIST

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter (µg/L), milligrams per liter (mg/L), and most probable number per 100 milliliters (MPN/100 mL), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

Method 8015D Modified: **The analyte TPH DRO was detected in the method blank from batch 68464 at 0.037 mg/L. TPH DRO was detected in samples EB-6-24-22, EP-2, and STP-1 to EP-2 at concentrations less than the blank detection and the results were qualified as U. TPH DRO was detected in samples DUP-6-24-22, MKTF-27, and MKTF-28 at concentrations greater than the blank detection but less than or equal to 10 times the blank concentration and the results were qualified as JB.** TPH DRO results in the associated samples that were greater than 10 times the blank detection did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|--------|------------------|--------|------------------|
| 200.7 | Total Metals | 68406 | Not Prepared |
| 200.7 | Dissolved Metals | B89068 | Not Prepared |
| 200.7 | Dissolved Metals | A89154 | Not Prepared |
| 200.8 | Total Metals | 68406 | DUP-6-24-22 |
| 200.8 | Dissolved Metals | B89062 | EB-6-24-22 |
| 200.8 | Dissolved Metals | C89140 | MKTF-27 |
| 245.1 | Total Mercury | 68497 | KA-3 |
| 504.1 | EDB | 68526 | EB-6-24-22 |
| 8015D | TPH DRO and MRO | 68495 | Not Prepared |
| 8015D | TPH DRO | 68464 | Not Prepared |
| 8015D | TPH GRO | A89090 | MKTF-27 |
| 8260B | VOC | R89248 | Not Prepared |
| 8270C | SVOC | 68408 | Not Prepared |
| 8270C | SVOC | 68468 | Not Prepared |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|----------|-----------|----------------------------|
| 8270 SIM | SVOC | 68408 | Not Prepared |
| 8270 SIM | SVOC | 68468 | Not Prepared |
| 5210B | BOD | 68337 | Not Prepared |
| 9223B | E. Coli | 68346 | Not Prepared |
| 4500 CN E | Cyanide | WG1888930 | Not Associated |
| 4500 CN E | Cyanide | WG1889365 | Not Associated and MKTF-28 |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

Recoveries and RPDs for MS/MSDs prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the exceptions listed in the following table.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------------|----------------------------|--------------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Nickel, Total | 68406 | 136% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68464 | 83.6% | Acceptable | 31.7-75.4% | Acceptable | 20% |
| 8270C | Pyrene | 68408 | Acceptable | Acceptable | 61-123% | 12.3% | 11.8% |
| 8270C | Acenaphthene | 68468 | Acceptable | Acceptable | 21.3-104% | 58.7% | 45.3% |
| 8270C | 1,4-Dichlorobenzene | 68468 | Acceptable | Acceptable | 15-89.8% | 55.4% | 39.6% |
| 8270C | Phenol | 68468 | Acceptable | Acceptable | 17-61.1% | 59.2% | 42.5% |
| 8270C | Pyrene | 68468 | Acceptable | Acceptable | 61-123% | 19.2% | 11.8% |
| 8270 SIM | 1,4-Dioxane | 68408 | 53.0% | Acceptable | 20.2-48.4% | Acceptable | 30.1% |
| 8270 SIM | Naphthalene | 68408 | 80.0% | Acceptable | 21.3-79.9% | Acceptable | 25.6% |
| 8270 SIM | Acenaphthene | 68408 | 84.0% | Acceptable | 29.8-82.7% | Acceptable | 27.8% |

Analytes with LCS recoveries greater than laboratory QC limits were detected in the associated samples and the results were qualified as J+ to indicate estimated concentrations that may be biased high. Non-detections did not require qualification based on the evidence of potential high bias.

Results for 1,4-dichlorobenzene and phenol were qualified as J if detected in the associated samples and UJ if not detected due to evidence of poor precision.

Qualification was not required for acenaphthene and pyrene by Method 8270C as the associated samples' results were reported from Method 8270 SIM and the non-compliant LCS results did not apply to those analyses.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the exceptions listed in the following table.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|----------|-----------------------------|---------------|--------------------|------------|
| 8015D | Bromofluorobenzene | NAPIS-2 | 354% | 70-130% |
| 8015D | Bromofluorobenzene | NAPIS-3 | 198% | 70-130% |
| 8015D | Bromofluorobenzene | KA-3 | 161% | 70-130% |
| 8015D | Di-n-octylphthalate | STP-1 to EP-2 | 25.5% | 42.2-138% |
| 8270C | 2-Fluorophenol | STP-1 to EP-2 | 0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | STP-1 to EP-2 | 0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | STP-1 to EP-2 | 0% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | STP-1 to EP-2 | 0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | STP-1 to EP-2 | 0% | 38.1-99.9% |
| 8270C | 4-Terphenyl-d ₁₄ | STP-1 to EP-2 | 0% | 48-155% |
| 8270 SIM | Nitrobenzene-d ₅ | STP-1 to EP-2 | 0% | 31.6-100% |
| 8270 SIM | 2-Fluorobiphenyl | STP-1 to EP-2 | 0% | 26.7-90.1% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | STP-1 to EP-2 | 0% | 72.3-147% |
| 8015D | Di-n-octylphthalate | EP-2 | 6.11% | 42.2-138% |
| 8270C | 2-Fluorophenol | EP-2 | 0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | EP-2 | 0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | EP-2 | 0% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | EP-2 | 0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | EP-2 | 0% | 38.1-99.9% |
| 8270C | 4-Terphenyl-d ₁₄ | EP-2 | 0% | 48-155% |
| 8270 SIM | Nitrobenzene-d ₅ | EP-2 | 0% | 31.6-100% |
| 8270 SIM | 2-Fluorobiphenyl | EP-2 | 0% | 26.7-90.1% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | EP-2 | 0% | 72.3-147% |
| 8270C | 2-Fluorophenol | EP-6 | 0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | EP-6 | 0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | EP-6 | 0% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | EP-6 | 0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | EP-6 | 0% | 38.1-99.9% |
| 8270C | 4-Terphenyl-d ₁₄ | EP-6 | 0% | 48-155% |
| 8270 SIM | Nitrobenzene-d ₅ | EP-6 | 0% | 31.6-100% |
| 8270 SIM | 2-Fluorobiphenyl | EP-6 | 0% | 26.7-90.1% |

The analyte associated with bromofluorobenzene (TPH GRO) was detected in the affected samples and was qualified as J+ to indicate estimated concentrations that may be biased high.

The analytes associated with Method 8015 D surrogate di-n-octylphthalate were qualified as J- if detected and UJ if not detected in the affected samples. As the surrogate recovery in sample EP-2 was less than 10%, the non-detect result for TPH ORO was qualified as R to indicate a rejected datum.

Qualification was not required for samples STP-1 to EP-2, EP-2, and EP-6 as the listed surrogates were diluted out.

Qualification was not required based on surrogate nonconformance in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-24-22, and one equipment blank sample, EB-6-24-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples, with the exceptions listed in the following table.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| FB-6-24-22 | 8260B | Acetone | 7.4 µg/L |
| FB-6-24-22 | 8260B | Toluene | 0.22 µg/L |
| FB-6-24-22 | 8260B | Xylenes, Total | 0.64 µg/L |
| EB-6-24-22 | 8260B | Acetone | 4.9 µg/L |
| EB-6-24-22 | 8260B | Chloromethane | 0.6 µg/L |
| EB-6-24-22 | 8260B | Toluene | 0.23 µg/L |
| EB-6-24-22 | 8260B | Xylenes, Total | 0.64 µg/L |
| EB-6-24-22 | 8015D | TPH GRO | 0.019 mg/L |
| EB-6-24-22 | 8015D | TPH DRO | 0.031 mg/L |
| EB-6-24-22 | 200.7 | Total Zinc | 0.0046 mg/L |
| EB-6-24-22 | 200.7 | Dissolved Zinc | 0.0053 mg/L |

Detections in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results were previously qualified due to laboratory blank contamination in batch 68464; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-24-22 was collected as a field duplicate of sample MKTF-27.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for total barium exceeded the data validation QC limit of 30% at 33.3%, which was evidence of poor precision. The total barium results were qualified as J for samples MKTF-27 and DUP-6-24-22.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? Yes

Comments: Laboratory duplicates prepared for these analyses and laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 410.4 | COD | WG1891521 | STP-1 to EP-2 and Not Associated |
| 4500 CN E | Cyanide | WG1888930 | Not Associated and EB-6-24-22 |
| 4500CN E | Cyanide | WG1889365 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

Laboratory duplicate RPDs were within data validation and laboratory QC limits.

The RPD values for laboratory duplicate samples prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| STP-1 to EP-2 | Antimony | 0.00056 | 0.0012 |
| NAPIS-2 | Barium | 4.4 | 4.9 |
| EP-6 | Barium | 0.31 | 0.32 |
| EP-6 | Chromium | ND | 0.021 |
| KA-3 | Nickel | 0.023 | 0.025 |
| EP-2 | Nickel | 0.05 | 0.052 |
| MKTF-27 | Selenium | ND | 0.0018 |
| STP-1 to EP-2 | Selenium | 0.00043 | 0.00045 |
| MKTF-27 | Silver | ND | 0.0062 |
| MKTF-28 | Silver | ND | 0.0022 |
| NAPIS-2 | Silver | 0.002 | 0.0028 |
| NAPIS-3 | Silver | 0.0024 | 0.0029 |
| STP-1 to EP-2 | Silver | 0.0044 | 0.0048 |
| EP-2 | Silver | ND | 0.01 |
| EP-6 | Silver | ND | 0.026 |
| DUP-6-24-22 | Silver | ND | 0.0058 |
| NAPIS-2 | Vanadium | ND | 0.0025 |



| VALIDATION CRITERIA CHECKLIST | | | | | |
|-------------------------------|------------------|----------------|--------------------------------|------------------------------------|--|
| | <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> | |
| | KA-3 | Vanadium | 0.014 | 0.016 | |
| | STP-1 to EP-2 | Vanadium | ND | 0.0022 | |
| | EP-2 | Vanadium | ND | 0.005 | |
| | EP-6 | Vanadium | ND | 0.016 | |
| | EB-6-24-22 | Zinc | 0.0046 | 0.0053 | |
| | MKTF-27 | Zinc | 0.0068 | 0.0084 | |
| | NAPIS-2 | Zinc | 0.0048 | 0.014 | |
| | NAPIS-3 | Zinc | 0.0041 | 0.0084 | |
| | KA-3 | Zinc | 0.0066 | 0.013 | |
| | EP-2 | Zinc | 0.0044 | 0.011 | |

FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-27
Field Duplicate Sample ID: DUP-6-24-22 | | | | |
|---|--------------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| 1,1-Dichloroethane | 8260B | 1.6 µg/L | 1.7 µg/L | 6.1% +/-RL |
| 1,1-Dichloroethene | 8260B | 0.87 µg/L | 0.85 µg/L | 2.3% +/-RL |
| 1,2-Dichloroethane | 8260B | 0.78 µg/L | 0.78 µg/L | 0.0% +/-RL |
| Acetone | 8260B | ND (10 µg/L) | 2.9 µg/L | DL |
| Benzene | 8260B | 0.55 µg/L | 0.63 µg/L | 13.6% +/-RL |
| MTBE | 8260B | 39 µg/L | 41 µg/L | 5.0% |
| 1,4-Dioxane | 8270 SIM | 8.4 µg/L | 7.1 µg/L | 16.8% |
| TPH GRO | 8015D | 0.046 mg/L | 0.028 mg/L | 48.6% +/-RL |
| TPH DRO | 8015D | 0.19 mg/L | 0.20 mg/L | 5.1% |
| Barium, Dissolved | 200.7 | 0.055 mg/L | 0.054 mg/L | 1.8% |
| Barium, Total | 200.7 | 0.14 mg/L | 0.10 mg/L | 33.3% |
| Nickel, Dissolved | 200.7 | 0.031 mg/L | 0.030 mg/L | 3.3% |
| Nickel, Total | 200.7 | 0.035 mg/L | 0.032 mg/L | 9.0% |
| Silver, Dissolved | 200.7 | 0.0062 mg/L | 0.0058 mg/L | 6.7% +/-RL |
| Vanadium, Dissolved | 200.7 | 0.0025 mg/L | 0.0023 mg/L | 8.3% +/-RL |
| Vanadium, Total | 200.7 | 0.0087 mg/L | 0.0063 mg/L | 32.0% +/-RL |
| Zinc, Dissolved | 200.7 | 0.0084 mg/L | 0.0072 mg/L | 15.4% +/-RL |
| Zinc, Total | 200.7 | 0.0068 mg/L | 0.0090 mg/L | 27.8% +/-RL |
| Arsenic, Dissolved | 200.8 | ND (0.005 mg/L) | 0.00092 mg/L | DL |
| Arsenic, Total | 200.8 | 0.0010 mg/L | 0.0013 mg/L | 26.1% +/-RL |
| Lead, Total | 200.8 | 0.0025 mg/L | 0.0019 mg/L | 27.3% +/-RL |
| Selenium, Dissolved | 200.8 | 0.0018 mg/L | ND (0.005 mg/L) | DL |
| Selenium, Total | 200.8 | ND (0.005 mg/L) | 0.0020 mg/L | DL |
| Cyanide, Total | 4500 CN E | 16.3 µg/L | 14.7 µg/L | 10.3% |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for total barium exceeded the data validation QC limit and was qualified as J for samples MKTF-27 and DUP-6-24-22 due to evidence of poor precision.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| FBD | Field blank detection |
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethene | SW8260B | MKTF-27 | 2206e09-002a | 0.87 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | DUP-6-24-22 | 2206e09-011a | 0.85 | 1 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | NAPIS-2 | 2206e09-004a | 1.7 | 2 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | NAPIS-3 | 2206e09-005a | 0.19 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | MKTF-27 | 2206e09-002a | 0.78 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | DUP-6-24-22 | 2206e09-011a | 0.78 | 1 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | NAPIS-2 | 2206e09-004a | 1.4 | 2 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | NAPIS-2 | 2206E09-004C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | NAPIS-3 | 2206E09-005C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | KA-3 | 2206E09-006C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | STP-1 to EP-2 | 2206E09-007C | ND | 50 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | EP-2 | 2206E09-008C | ND | 500 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | EP-6 | 2206E09-009C | ND | 200 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| 1,4-Dichlorobenzene | SW8270C | DUP-6-24-22 | 2206E09-011C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-27 | 2206e09-002c | 8.4 | 1 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | MKTF-28 | 2206e09-003c | 0.78 | 1 | µg/L | J+ | HR-LCS, MDLRL |
| 1,4-Dioxane | SW8270C | NAPIS-3 | 2206e09-005c | 0.68 | 1 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | KA-3 | 2206e09-006c | 0.58 | 1 | µg/L | J | MDLRL |
| Acetone | SW8260B | EP-2 | 2206e09-008a | 10 | 10 | µg/L | JB | FBD |
| Acetone | SW8260B | EP-6 | 2206e09-009a | 23 | 10 | µg/L | JB | FBD |
| Acetone | SW8260B | EB-6-24-22 | 2206e09-001a | 4.9 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | MKTF-28 | 2206e09-003a | 2.7 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | NAPIS-2 | 2206e09-004a | 15 | 20 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | NAPIS-3 | 2206e09-005a | 6.5 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | KA-3 | 2206e09-006a | 2.7 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | STP-1 to EP-2 | 2206e09-007a | 4.2 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | FB-6-24-22 | 2206e09-010a | 7.4 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | DUP-6-24-22 | 2206e09-011a | 2.9 | 10 | µg/L | J | MDLRL |
| Anthracene | SW8270C | NAPIS-2 | 2206e09-004c | 0.22 | 0.3 | µg/L | J | MDLRL |
| Antimony, Total | E200.8 | STP-1 to EP-2 | 2206E09-007D | 0.00056 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-28 | 2206E09-003E | 0.00084 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | KA-3 | 2206E09-006E | 0.00071 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-24-22 | 2206E09-011E | 0.00092 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-27 | 2206E09-002D | 0.001 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | KA-3 | 2206E09-006D | 0.00081 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-24-22 | 2206E09-011D | 0.0013 | 0.005 | mg/L | J | MDLRL |
| Barium, Total | E 200.7 | MKTF-27 | 2206E09-002D | 0.14 | 0.003 | mg/L | J | ERPD-FD |
| Barium, Total | E 200.7 | DUP-6-24-22 | 2206E09-011D | 0.1 | 0.003 | mg/L | J | ERPD-FD |
| Benzene | SW8260B | MKTF-27 | 2206e09-002a | 0.55 | 1 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Benzene | SW8260B | DUP-6-24-22 | 2206e09-011a | 0.63 | 1 | µg/L | J | MDLRL |
| Carbon Disulfide | SW8260B | EP-2 | 2206e09-008a | 1.3 | 10 | µg/L | J | MDLRL |
| Chloroform | SW8260B | NAPIS-2 | 2206e09-004a | 0.76 | 2 | µg/L | J | MDLRL |
| Chloroform | SW8260B | NAPIS-3 | 2206e09-005a | 0.22 | 1 | µg/L | J | MDLRL |
| Chloroform | SW8260B | KA-3 | 2206e09-006a | 0.25 | 1 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | NAPIS-2 | 2206e09-004a | 1.3 | 6 | µg/L | U | EBD, MDLRL |
| Chloromethane | SW8260B | NAPIS-3 | 2206e09-005a | 0.64 | 3 | µg/L | U | EBD, MDLRL |
| Chloromethane | SW8260B | STP-1 to EP-2 | 2206e09-007a | 0.61 | 3 | µg/L | U | EBD, MDLRL |
| Chloromethane | SW8260B | EP-2 | 2206e09-008a | 0.76 | 3 | µg/L | U | EBD, MDLRL |
| Chloromethane | SW8260B | EP-6 | 2206e09-009a | 1.4 | 3 | µg/L | U | EBD, MDLRL |
| Chloromethane | SW8260B | EB-6-24-22 | 2206e09-001a | 0.6 | 3 | µg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | EP-6 | 2206E09-009E | 0.021 | 0.03 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-28 | 2206E09-003D | 0.0021 | 0.006 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | EP-6 | 2206E09-009F | 4.4 | 5 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | NAPIS-2 | 2206E09-004E | 0.00025 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | KA-3 | 2206E09-006E | 0.00024 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | KA-3 | 2206E09-006D | 0.0004 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | STP-1 to EP-2 | 2206E09-007D | 0.00021 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-6-24-22 | 2206E09-011D | 0.0019 | 0.0025 | mg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-28 | 2206e09-003a | 0.7 | 1 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | NAPIS-2 | 2206e09-004a | 1.5 | 6 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | NAPIS-3 | 2206e09-005a | 0.39 | 3 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-28 | 2206E09-003E | 0.0059 | 0.01 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-27 | 2206E09-002D | 0.035 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | NAPIS-2 | 2206E09-004D | 0.064 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | NAPIS-3 | 2206E09-005D | 0.025 | 0.01 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| Nickel, Total | E 200.7 | KA-3 | 2206E09-006D | 0.023 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | EP-2 | 2206E09-008D | 0.05 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | EP-6 | 2206E09-009D | 0.24 | 0.1 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | DUP-6-24-22 | 2206E09-011D | 0.032 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | MKTF-28 | 2206E09-003D | 0.009 | 0.01 | mg/L | J+ | HR-LCS, MDLRL |
| n-Propylbenzene | SW8260B | KA-3 | 2206e09-006a | 0.59 | 1 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | NAPIS-2 | 2206e09-004c | 0.18 | 0.3 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | NAPIS-3 | 2206e09-005c | 0.16 | 0.3 | µg/L | J | MDLRL |
| Phenol | SW8270C | NAPIS-2 | 2206E09-004C | 52 | 20 | µg/L | J | ERPD-LCS |
| Phenol | SW8270C | NAPIS-3 | 2206E09-005C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | KA-3 | 2206E09-006C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | STP-1 to EP-2 | 2206E09-007C | ND | 200 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | EP-2 | 2206E09-008C | ND | 2000 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | EP-6 | 2206E09-009C | ND | 800 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | DUP-6-24-22 | 2206E09-011C | ND | 20 | µg/L | UJ | ERPD-LCS |
| sec-Butylbenzene | SW8260B | NAPIS-3 | 2206e09-005a | 0.77 | 1 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | KA-3 | 2206e09-006a | 0.26 | 1 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-27 | 2206E09-002E | 0.0018 | 0.005 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | STP-1 to EP-2 | 2206E09-007E | 0.00045 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | NAPIS-3 | 2206E09-005D | 0.00037 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | STP-1 to EP-2 | 2206E09-007D | 0.00043 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | EP-6 | 2206E09-009D | 0.011 | 0.02 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-6-24-22 | 2206E09-011D | 0.002 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-28 | 2206E09-003E | 0.0022 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | NAPIS-2 | 2206E09-004E | 0.0028 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | NAPIS-3 | 2206E09-005E | 0.0029 | 0.005 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|----------------------------|
| Silver, Dissolved | E 200.7 | STP-1 to EP-2 | 2206E09-007E | 0.0048 | 0.005 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | NAPIS-2 | 2206E09-004D | 0.002 | 0.005 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | NAPIS-3 | 2206E09-005D | 0.0024 | 0.005 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | STP-1 to EP-2 | 2206E09-007D | 0.0044 | 0.005 | mg/L | J | MDLRL |
| Toluene | SW8260B | EB-6-24-22 | 2206e09-001a | 0.23 | 1 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | NAPIS-2 | 2206e09-004a | 0.7 | 2 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | NAPIS-3 | 2206e09-005a | 0.23 | 1 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | FB-6-24-22 | 2206e09-010a | 0.22 | 1 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | NAPIS-2 | 2206E09-004C | 1.7 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | NAPIS-3 | 2206E09-005C | 0.54 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | KA-3 | 2206E09-006C | 1.2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | EP-6 | 2206E09-009C | 0.9 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | STP-1 to EP-2 | 2206E09-007C | 0.04 | 0.064 | mg/L | U | HR-LCS, LR-SUR, MBD, MDLRL |
| TPH DRO | SW8015 | EP-2 | 2206E09-008C | 0.045 | 0.064 | mg/L | U | HR-LCS, LR-SUR, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-27 | 2206E09-002C | 0.19 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-28 | 2206E09-003C | 0.19 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | DUP-6-24-22 | 2206E09-011C | 0.2 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | EB-6-24-22 | 2206E09-001C | 0.031 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | NAPIS-2 | 2206e09-004a | 4.2 | 0.05 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | NAPIS-3 | 2206e09-005a | 0.9 | 0.05 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | KA-3 | 2206e09-006a | 0.15 | 0.05 | mg/L | JB | EBD, HR-SUR |
| TPH GRO | SW8015 | MKTF-27 | 2206e09-002a | 0.046 | 0.05 | mg/L | U | EBD, MDLRL |
| TPH GRO | SW8015 | EP-2 | 2206e09-008a | 0.0096 | 0.05 | mg/L | U | EBD, MDLRL |
| TPH GRO | SW8015 | DUP-6-24-22 | 2206e09-011a | 0.028 | 0.05 | mg/L | U | EBD, MDLRL |
| TPH GRO | SW8015 | EB-6-24-22 | 2206e09-001a | 0.019 | 0.05 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | EP-2 | 2206E09-008C | ND | 0.08 | mg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH ORO | SW8015 | STP-1 to EP-2 | 2206E09-007C | ND | 0.08 | mg/L | UJ | LR-SUR |
| TPH ORO | SW8015 | EP-6 | 2206E09-009C | 0.058 | 0.08 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-27 | 2206E09-002E | 0.0025 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-28 | 2206E09-003E | 0.0042 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | NAPIS-2 | 2206E09-004E | 0.0025 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | KA-3 | 2206E09-006E | 0.016 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1 to EP-2 | 2206E09-007E | 0.0022 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | EP-2 | 2206E09-008E | 0.005 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | EP-6 | 2206E09-009E | 0.016 | 0.25 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-24-22 | 2206E09-011E | 0.0023 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-27 | 2206E09-002D | 0.0087 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-28 | 2206E09-003D | 0.012 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | KA-3 | 2206E09-006D | 0.014 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-24-22 | 2206E09-011D | 0.0063 | 0.05 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | NAPIS-3 | 2206e09-005a | 3.3 | 1.5 | µg/L | JB | FBD |
| Xylenes, Total | SW8260B | EB-6-24-22 | 2206e09-001a | 0.64 | 1.5 | µg/L | U | FBD, MDLRL |
| Xylenes, Total | SW8260B | KA-3 | 2206e09-006a | 0.72 | 1.5 | µg/L | U | FBD, MDLRL |
| Xylenes, Total | SW8260B | EP-2 | 2206e09-008a | 0.66 | 1.5 | µg/L | U | FBD, MDLRL |
| Xylenes, Total | SW8260B | EP-6 | 2206e09-009a | 0.65 | 1.5 | µg/L | U | FBD, MDLRL |
| Xylenes, Total | SW8260B | FB-6-24-22 | 2206e09-010a | 0.64 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | NAPIS-2 | 2206E09-004E | 0.014 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | KA-3 | 2206E09-006E | 0.013 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | STP-1 to EP-2 | 2206E09-007E | 0.025 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EP-2 | 2206E09-008E | 0.011 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-6-24-22 | 2206E09-001E | 0.0053 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-27 | 2206E09-002E | 0.0084 | 0.01 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | MKTF-28 | 2206E09-003E | 0.009 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | NAPIS-3 | 2206E09-005E | 0.0084 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-24-22 | 2206E09-011E | 0.0072 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | MKTF-28 | 2206E09-003D | 0.018 | 0.01 | mg/L | JB | EBD |
| Zinc, Total | E 200.7 | STP-1 to EP-2 | 2206E09-007D | 0.046 | 0.01 | mg/L | JB | EBD |
| Zinc, Total | E 200.7 | MKTF-27 | 2206E09-002D | 0.0068 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | NAPIS-2 | 2206E09-004D | 0.0048 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | NAPIS-3 | 2206E09-005D | 0.0041 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | KA-3 | 2206E09-006D | 0.0066 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | EP-2 | 2206E09-008D | 0.0044 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | DUP-6-24-22 | 2206E09-011D | 0.009 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | EB-6-24-22 | 2206E09-001D | 0.0046 | 0.01 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task 0006 | Sample Start Date: 06/28/2022 |
| Date Validated: 10/03/2022 | Sample End Date: 06/28/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270 with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206F41 | |
| Data Validator: Kyle Power, Environmental Chemist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blank
- Field blank
- Equipment blank

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-28-22 | 2206F41-001 |
| MKTF-30 | 2206F41-002 |
| MKTF-29 | 2206F41-003 |
| OPIS-1 | 2206F41-004 |
| STP-1-NM | 2206F41-005 |
| OW-12A | 2206F41-006 |
| OW-70 | 2206F41-007 |
| DUP-6-28-22 | 2206F41-008 |
| FB-6-28-22 | 2206F41-009 |
| Trip Blank | 2206F41-010 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicate (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | No |
| <p>Comments: The laboratory noted the following non-conformances regarding the analytical data.</p> <p><u>Method 8270C</u>: The recovery for pyrene in the LCSD was slightly low.</p> <p>"S" flagged surrogates denote low surrogate recoveries due to matrix interferences/sample dilution.</p> | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No |
| <p>Comments: The laboratory used the following data qualification flags with this data set.</p> <p>D – Sample diluted due to matrix</p> <p>J – Analyte detected below quantitation limits</p> <p>J3 – The associated batch QC was outside the established quality control range for precision.</p> <p>J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.</p> <p>P1 – RPD value not applicable for sample concentrations less than 5 times the RL.</p> <p>R – RPD outside of range</p> <p>S – % Recovery outside of range due to dilution or matrix interference.</p> <p>* – Value exceeds maximum contaminant level.</p> | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| <p>Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.</p> | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| <p>Comments: The detection limits appeared to be acceptable. The following dilutions were applied.</p> <p><u>Method 8260B</u>: Dilutions of 2 to 20 times were applied for the VOC analyses of select samples.</p> <p><u>Methods 8270C/8270 SIM</u>: A dilution of 10 times was applied for the SVOC analysis of sample OPIS-1.</p> <p><u>Method 8015D</u>: A dilution of 2 times was applied for the TPH GRO analysis of sample OPIS-1.</p> <p><u>Method 8015D Modified</u>: A dilution of 2 times was applied for the TPH DRO and TPH MRO analyses of sample OPIS-1.</p> <p><u>Method 200.7</u>: Dilutions of 5 times were applied for the total barium analyses of samples OPIS-1 and OW-12A.</p> <p><u>Method 200.8</u>: A dilution of 5 times was applied for the dissolved metals analysis of sample OPIS-1.</p> | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |



| VALIDATION CRITERIA CHECKLIST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|------------------|--------|------------------|-------|------------------|-------|--------------|-------|--------------|-------|------------------|--------|--------------|-------|--------------|-------|--------------|-------|------------------|--------|------------|-------|---------------|-------|--------|-------|-----|-------|--------------|
| 6. Were samples received in good condition within method-specified requirements? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of 4°C ± 2°C between 2.1°C and 5.2°C as noted on the <i>Sample Log-In Check List</i> and CoC. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.</p> <p>Method 8015D Modified: The analyte TPH DRO was detected in the method blanks from batches 68495 and 68464 at 0.023 mg/L and 0.037 mg/L, respectively. TPH DRO was detected in sample EB-6-28-22 at a concentration less than the blank detection, and the result was qualified as U. TPH DRO was detected in samples MKTF-30 and STP-1-NM at concentrations greater than the blank detection but less than or equal to 10 times the blank concentration, and the results were qualified as JB.</p> <p>TPH DRO non-detections in the associated samples and results greater than 10 times the blank detections did not require qualification.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.</p> <table border="1"> <thead> <tr> <th>Method</th> <th>Analytes</th> <th>Batch</th> <th>MS Sample Source</th> </tr> </thead> <tbody> <tr> <td>200.7</td> <td>Total Metals</td> <td>68545</td> <td>Not Prepared</td> </tr> <tr> <td>200.7</td> <td>Dissolved Metals</td> <td>B89154</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Total Metals</td> <td>68545</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Dissolved Metals</td> <td>A89215</td> <td>EB-6-28-22</td> </tr> <tr> <td>245.1</td> <td>Total Mercury</td> <td>68621</td> <td>OW-12A</td> </tr> <tr> <td>504.1</td> <td>EDB</td> <td>68566</td> <td>Not Prepared</td> </tr> </tbody> </table> | | Method | Analytes | Batch | MS Sample Source | 200.7 | Total Metals | 68545 | Not Prepared | 200.7 | Dissolved Metals | B89154 | Not Prepared | 200.8 | Total Metals | 68545 | Not Prepared | 200.8 | Dissolved Metals | A89215 | EB-6-28-22 | 245.1 | Total Mercury | 68621 | OW-12A | 504.1 | EDB | 68566 | Not Prepared |
| Method | Analytes | Batch | MS Sample Source | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Total Metals | 68545 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Dissolved Metals | B89154 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Total Metals | 68545 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Metals | A89215 | EB-6-28-22 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 245.1 | Total Mercury | 68621 | OW-12A | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 504.1 | EDB | 68566 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------|-----------|--------------------------|
| 8015D | TPH DRO and MRO | 68495 | Not Prepared |
| 8015D | TPH DRO | 68464 | Not Prepared |
| 8015D | TPH GRO | R89210 | Not Prepared |
| 8260B | VOC | B89226 | Not Prepared |
| 8260B | VOC | R89293 | Not Prepared |
| 8270C | SVOC | 68493 | Not Prepared |
| 8270C | SVOC | 68468 | Not Prepared |
| 8270 SIM | SVOC | 68493 | Not Prepared |
| 8270 SIM | SVOC | 68468 | Not Prepared |
| 4500 CN E | Cyanide | WG1889907 | Not Prepared |
| 4500 CN E | Cyanide | WG1891839 | Not Associated and OW-70 |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

Recoveries and RPDs for MS/MSDs prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the exceptions listed in the following table.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|----------|---------------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Nickel, Total | 68545 | 132% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68464 | 83.6% | Acceptable | 31.7-75.4% | Acceptable | 20% |
| 8015D | TPH DRO | 68495 | 75.5% | 78.6% | 31.7-75.4% | Acceptable | 20% |
| 8270C | Acenaphthene | 68493 | Acceptable | Acceptable | 21.3-104% | 53.0% | 45.3% |
| 8270C | 1,4-Dichlorobenzene | 68493 | Acceptable | Acceptable | 15-89.8% | 49.3% | 39.6% |
| 8270C | Phenol | 68493 | Acceptable | Acceptable | 17-61.1% | 55.7% | 42.5% |
| 8270C | Pyrene | 68493 | Acceptable | 55.4% | 61-123% | 30.2% | 11.8% |
| 8270C | Acenaphthene | 68468 | Acceptable | Acceptable | 21.3-104% | 58.7% | 45.3% |
| 8270C | 1,4-Dichlorobenzene | 68468 | Acceptable | Acceptable | 15-89.8% | 55.4% | 39.6% |
| 8270C | Phenol | 68468 | Acceptable | Acceptable | 17-61.1% | 59.2% | 42.5% |
| 8270C | Pyrene | 68468 | Acceptable | Acceptable | 61-123% | 19.2% | 11.8% |
| 8270 SIM | 1,4-Dioxane | 68493 | 49.0% | Acceptable | 20.2-48.4% | 86.5% | 30.1% |
| 8270 SIM | Naphthalene | 68493 | Acceptable | Acceptable | 21.3-79.9% | 87.9% | 25.6% |



VALIDATION CRITERIA CHECKLIST

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|----------|---------------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 8270 SIM | 1-Methylnaphthalene | 68493 | Acceptable | Acceptable | 22.2-80.3% | 80.4% | 25% |
| 8270 SIM | 2-Methylnaphthalene | 68493 | Acceptable | Acceptable | 20.6-80.1% | 76.6% | 25% |
| 8270 SIM | Acenaphthene | 68493 | Acceptable | Acceptable | 29.8-82.7% | 80.3% | 27.8% |
| 8270 SIM | Fluorene | 68493 | Acceptable | Acceptable | 33.3-86% | 56.5% | 26.4% |
| 8270 SIM | Phenanthrene | 68493 | Acceptable | Acceptable | 38.2-93.9% | 33.3% | 27.9% |
| 8270 SIM | Chrysene | 68493 | Acceptable | Acceptable | 55.3-115% | 34.7% | 20% |

Analytes with LCS and/or LCSD recoveries greater than laboratory QC limits were detected in the associated samples, and the results were qualified as J+ to indicate estimated concentrations that may be biased high. Analytes with LCS/LCSD RPD values exceeding laboratory QC limits were qualified as J if detected and UJ if not detected due to poor precision.

Qualification was not required for acenaphthene and pyrene by Method 8270C as the associated samples' results were reported from Method 8270 SIM.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the exceptions listed in the following table.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|----------|-----------------------------|-------------|--------------------|------------|
| 8015D | Bromofluorobenzene | OPIS-1 | 145% | 70-130% |
| 8270C | 2-Fluorophenol | OPIS-1 | 0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OPIS-1 | 0% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | OPIS-1 | 0% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | OPIS-1 | 0% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OPIS-1 | 0% | 38.1-99.9% |
| 8270C | 4-Terphenyl-d ₁₄ | OPIS-1 | 0% | 48-155% |
| 8270 SIM | Nitrobenzene-d ₅ | OPIS-1 | 0% | 31.6-100% |
| 8270 SIM | 2-Fluorobiphenyl | OPIS-1 | 0% | 26.7-90.1% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | OPIS-1 | 0% | 72.3-147% |
| 8015D | Bromofluorobenzene | OW-12A | 261% | 70-130% |
| 8270C | Phenol-d ₅ | OW-12A | 0% | 28.5-64.7% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | OW-12A | 66.1% | 72.3-147% |
| 8015D | Bromofluorobenzene | OW-70 | 441% | 70-130% |
| 8270C | 2,4,6-Tribromophenol | DUP-6-28-22 | 15.6% | 18.6-129% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | DUP-6-28-22 | 71.2% | 72.3-147% |

The analyte associated with bromofluorobenzene (TPH GRO) was detected in the affected samples and was qualified as J+ to indicate estimated concentrations that may be biased high.

The semivolatile organic compound results for sample OPIS-1 were not qualified based on the surrogate non-conformances in the Method 8270C and Method 8270 SIM analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and these results were deemed unreliable and possibly inaccurate.

Since Methods 8270C and 8270 SIM surrogate associations were not available from the laboratory, qualification was assigned to all the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples OW-12A and DUP-6-28-22, and qualification of sample data was not required.

Qualification was not required based on surrogate nonconformance in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-28-22, and one equipment blank sample, EB-6-28-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples, with the exceptions listed in the following table.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Acetone | 3.2 µg/L |
| FB-6-28-22 | 8260B | Acetone | 6.4 µg/L |
| FB-6-28-22 | 8260B | Chloromethane | 0.50 µg/L |
| EB-6-28-22 | 8260B | Acetone | 5.9 µg/L |
| EB-6-28-22 | 8260B | Chloromethane | 0.41 µg/L |
| EB-6-28-22 | 200.7 | Dissolved Zinc | 0.0038 mg/L |
| EB-6-28-22 | 8015D | TPH GRO | 0.010 mg/L |
| EB-6-28-22 | 8015D | TPH DRO | 0.022 mg/L |

Detections in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results were previously qualified due to laboratory blank contamination in batches 68495 and 68464; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-28-22 was collected as a field duplicate of sample MKTF-29.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for TPH DRO exceeded the data validation QC limit of 30% at 56.2%, which was evidence of poor precision. The TPH DRO results were qualified as J for samples MKTF-29 and DUP-6-28-22.

An RPD value could not be calculated for TPH MRO for the field duplicate pairs MKTF-29 and DUP-6-28-22 because the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent was greater than two times the reporting limits, TPH MRO was qualified as J and UJ for the parent and duplicate samples, respectively.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates prepared for these analyses and laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500 CN E | Cyanide | WG1889907 | Not Associated |
| 4500CN E | Cyanide | WG1891839 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD values for laboratory duplicate samples prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic? N/A
- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)?

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OPIS-1 | Cadmium | ND | 0.0011 |
| DUP-6-28-22 | Selenium | 0.00041 | 0.0009 |
| OPIS-1 | Selenium | 0.0014 | 0.0018 |
| STP-1-NM | Selenium | 0.0046 | 0.0078 |
| DUP-6-28-22 | Silver | ND | 0.0066 |
| MKTF-29 | Silver | ND | 0.0072 |
| MKTF-30 | Silver | ND | 0.0025 |
| OPIS-1 | Silver | ND | 0.0029 |
| OW-12A | Silver | ND | 0.0021 |
| STP-1-NM | Silver | ND | 0.0016 |
| STP-1-NM | Vanadium | 0.038 | 0.039 |
| DUP-6-28-22 | Zinc | 0.0082 | 0.0086 |
| EB-6-28-22 | Zinc | ND | 0.0038 |
| OPIS-1 | Zinc | 0.029 | 0.032 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-29
Field Duplicate Sample ID: DUP-6-28-22 | | | | |
|---|--------------|-------------------|-----------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| 1,1-Dichloroethane | 8260B | 0.94 µg/L | 0.91 µg/L | 3.2% +/-RL |
| Chloromethane | 8260B | 0.52 µg/L | 0.47 µg/L | 10.1% +/-RL |
| MTBE | 8260B | 22 µg/L | 22 µg/L | 0.0% |
| 1,4-Dioxane | 8270 SIM | 4.5 µg/L | 4.0 µg/L | 11.8% |
| TPH GRO | 8015D | 0.025 mg/L | 0.025 mg/L | 0.0% +/-RL |
| TPH DRO | 8015D | 0.57 mg/L | 0.32 mg/L | 56.2% |
| TPH MRO | 8015D | 0.57 mg/L | ND (0.08 mg/L) | DL |
| Barium, Dissolved | 200.7 | 0.16 mg/L | 0.15 mg/L | 6.5% |
| Barium, Total | 200.7 | 0.26 mg/L | 0.25 mg/L | 3.9% |
| Cobalt, Total | 200.7 | 0.0070 mg/L | 0.0086 mg/L | 20.5% +/-RL |
| Nickel, Dissolved | 200.7 | 0.015 mg/L | 0.015 mg/L | 0.0% +/-RL |
| Nickel, Total | 200.7 | 0.024 mg/L | 0.024 mg/L | 0.0% |
| Silver, Dissolved | 200.7 | 0.0072 mg/L | 0.0066 mg/L | 8.7% +/-RL |
| Vanadium, Dissolved | 200.7 | 0.0064 mg/L | 0.0064 mg/L | 0.0% +/-RL |
| Vanadium, Total | 200.7 | 0.0073 mg/L | 0.0072 mg/L | 1.4% +/-RL |
| Zinc, Dissolved | 200.7 | 0.0087 mg/L | 0.0086 mg/L | 1.2% +/-RL |
| Zinc, Total | 200.7 | 0.013 mg/L | 0.0082 mg/L | 45.3% +/-RL |
| Arsenic, Dissolved | 200.8 | 0.00083 mg/L | 0.00080 mg/L | 3.7% +/-RL |
| Arsenic, Total | 200.8 | 0.00096 mg/L | 0.00095 mg/L | 1.0% +/-RL |
| Lead, Dissolved | 200.8 | 0.000064 mg/L | 0.000061 mg/L | 4.8% +/-RL |
| Lead, Total | 200.8 | 0.00053 mg/L | 0.00040 mg/L | 28.0% +/-RL |
| Selenium, Dissolved | 200.8 | ND (0.0010 mg/L) | 0.00090 mg/L | DL |
| Selenium, Total | 200.8 | 0.00075 mg/L | 0.00041 mg/L | 58.6% +/-RL |
| Cyanide, Total | 4500 CN E | 6.31 µg/L | 6.92 µg/L | 9.2% +/-RL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL). **TPH MRO was detected in the parent sample, but not in the duplicate sample. As the detected result was greater than two times the reporting limit, TPH MRO was qualified as J and UJ for the parent and duplicate samples, respectively.**

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for TPH DRO exceeded the data validation QC limit and was qualified as J for samples MKTF-29 and DUP-6-28-22 due to evidence of poor precision.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| ERPD-FD | High field duplicate RPD. |
| MBD | Method blank detection |
| FBD | Field blank detection |
| EBD | Equipment blank detection |
| TBD | Trip blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-29 | 2206f41-003a | 0.94 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OPIS-1 | 2206f41-004a | 3 | 5 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-12A | 2206f41-006a | 1.1 | 2 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-70 | 2206f41-007a | 0.74 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP-6-28-22 | 2206f41-008a | 0.91 | 1 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OPIS-1 | 2206f41-004a | 1.2 | 5 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-70 | 2206f41-007a | 0.25 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-12A | 2206f41-006a | 0.92 | 2 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | EB-6-28-22 | 2206F41-001C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-30 | 2206F41-002C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-29 | 2206F41-003C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OPIS-1 | 2206F41-004C | ND | 50 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | STP-1-NM | 2206F41-005C | ND | 5 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-------------------------|
| 1,4-Dichlorobenzene | SW8270C | OW-12A | 2206F41-006C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-70 | 2206F41-007C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | DUP-6-28-22 | 2206F41-008C | ND | 5 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | STP-1-NM | 2206f41-005c | 0.22 | 1 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-12A | 2206f41-006c | 16 | 1 | µg/L | J+ | ERPD-LCS, HR-LCS |
| 1,4-Dioxane | SW8270C | DUP-6-28-22 | 2206f41-008c | 4 | 1 | µg/L | J+ | ERPD-LCS, HR-LCS |
| 1,4-Dioxane | SW8270C | OW-70 | 2206f41-007c | 0.7 | 1 | µg/L | J+ | ERPD-LCS, HR-LCS, MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-12A | 2206f41-006c | 0.96 | 0.3 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-70 | 2206f41-007c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Butanone | SW8260B | OW-12A | 2206f41-006a | 4.7 | 20 | µg/L | J | MDLRL |
| 2-Butanone | SW8260B | OW-70 | 2206f41-007a | 2.6 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-12A | 2206f41-006c | 0.42 | 0.3 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-70 | 2206f41-007c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-12A | 2206f41-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-70 | 2206f41-007c | 0.24 | 0.3 | µg/L | J | ERPD-LCS, MDLRL |
| Acetone | SW8260B | Trip Blank | 2206f41-010a | 3.2 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-6-28-22 | 2206f41-001a | 5.9 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-12A | 2206f41-006a | 11 | 20 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-70 | 2206f41-007a | 7.5 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | FB-6-28-22 | 2206f41-009a | 6.4 | 10 | µg/L | U | MDLRL, TBD |
| Arsenic, Dissolved | E200.8 | MKTF-30 | 2206F41-002E | 0.00063 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-29 | 2206F41-003E | 0.00083 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-28-22 | 2206F41-008E | 0.0008 | 0.001 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|-----------------|
| Arsenic, Total | E200.8 | MKTF-29 | 2206F41-003D | 0.00096 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-28-22 | 2206F41-008D | 0.00095 | 0.001 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | MKTF-30 | 2206F41-002D | 0.0009 | 0.002 | mg/L | J | MDLRL |
| Cadmium, Dissolved | E 200.7 | OPIS-1 | 2206F41-004E | 0.0011 | 0.002 | mg/L | J | MDLRL |
| Chloromethane | SW8260B | EB-6-28-22 | 2206f41-001a | 0.41 | 3 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | MKTF-29 | 2206f41-003a | 0.52 | 3 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | STP-1-NM | 2206f41-005a | 0.44 | 3 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | OW-12A | 2206f41-006a | 2.2 | 6 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | OW-70 | 2206f41-007a | 1.4 | 3 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | DUP-6-28-22 | 2206f41-008a | 0.47 | 3 | µg/L | U | FBD, MDLRL |
| Chloromethane | SW8260B | FB-6-28-22 | 2206f41-009a | 0.5 | 3 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OPIS-1 | 2206F41-004D | 0.0022 | 0.006 | mg/L | J | MDLRL |
| Chrysene | SW8270C | OW-12A | 2206f41-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-70 | 2206f41-007c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| cis-1,2-Dichloroethene | SW8260B | OW-12A | 2206f41-006a | 0.94 | 2 | µg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OPIS-1 | 2206F41-004E | 0.0051 | 0.006 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-70 | 2206F41-007E | 0.0053 | 0.006 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-30 | 2206F41-002F | 2.91 | 5 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-12A | 2206F41-006F | 2.42 | 5 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-70 | 2206F41-007F | 4.04 | 5 | µg/L | J | MDLRL |
| Fluorene | SW8270C | OW-70 | 2206f41-007c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-12A | 2206f41-006c | 0.16 | 0.3 | µg/L | J | ERPD-LCS, MDLRL |
| Lead, Dissolved | E200.8 | MKTF-29 | 2206F41-003E | 0.000064 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-70 | 2206F41-007E | 0.00013 | 0.0005 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|-----------------|
| Lead, Dissolved | E200.8 | DUP-6-28-22 | 2206F41-008E | 0.000061 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-6-28-22 | 2206F41-008D | 0.0004 | 0.0005 | mg/L | J | MDLRL |
| MTBE | SW8260B | STP-1-NM | 2206f41-005a | 0.41 | 1 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-12A | 2206f41-006c | 2.8 | 0.3 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-70 | 2206f41-007c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| n-Butylbenzene | SW8260B | OW-70 | 2206f41-007a | 1.2 | 3 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-12A | 2206F41-006E | 0.0068 | 0.01 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-12A | 2206F41-006E | 0.0068 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | MKTF-30 | 2206F41-002D | 0.03 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | MKTF-29 | 2206F41-003D | 0.024 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OPIS-1 | 2206F41-004D | 0.18 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-12A | 2206F41-006D | 0.02 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-70 | 2206F41-007D | 0.05 | 0.01 | mg/L | J+ | HR-LCS |
| n-Propylbenzene | SW8260B | OPIS-1 | 2206f41-004a | 1 | 5 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | OW-70 | 2206f41-007c | 0.62 | 0.3 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | OW-12A | 2206f41-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | DUP-6-28-22 | 2206f41-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | EB-6-28-22 | 2206F41-001C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-30 | 2206F41-002C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-29 | 2206F41-003C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OPIS-1 | 2206F41-004C | ND | 200 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | STP-1-NM | 2206F41-005C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-12A | 2206F41-006C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-70 | 2206F41-007C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | DUP-6-28-22 | 2206F41-008C | ND | 20 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|--------------------|
| sec-Butylbenzene | SW8260B | OW-12A | 2206f41-006a | 0.95 | 2 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-30 | 2206F41-002E | 0.00037 | 0.001 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OPIS-1 | 2206F41-004E | 0.0018 | 0.005 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-12A | 2206F41-006E | 0.00058 | 0.001 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP-6-28-22 | 2206F41-008E | 0.0009 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-29 | 2206F41-003D | 0.00075 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-70 | 2206F41-007D | 0.00051 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-6-28-22 | 2206F41-008D | 0.00041 | 0.001 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-30 | 2206F41-002E | 0.0025 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OPIS-1 | 2206F41-004E | 0.0029 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | STP-1-NM | 2206F41-005E | 0.0016 | 0.005 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-12A | 2206F41-006E | 0.0021 | 0.005 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-12A | 2206f41-006a | 1.5 | 2 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OPIS-1 | 2206F41-004C | 6 | 0.13 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-12A | 2206F41-006C | 2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-70 | 2206F41-007C | 0.97 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-30 | 2206F41-002C | 0.11 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | STP-1-NM | 2206F41-005C | 0.17 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | EB-6-28-22 | 2206F41-001C | 0.022 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-29 | 2206F41-003C | 0.57 | 0.064 | mg/L | J+ | ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | DUP-6-28-22 | 2206F41-008C | 0.32 | 0.064 | mg/L | J+ | ERPD-FD, HR-LCS |
| TPH GRO | SW8015 | OPIS-1 | 2206F41-004a | 0.48 | 0.1 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-12A | 2206F41-006a | 2.8 | 0.05 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-70 | 2206F41-007a | 0.38 | 0.05 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-30 | 2206F41-002a | 0.022 | 0.05 | mg/L | U | EBD, MDLRL |
| TPH GRO | SW8015 | MKTF-29 | 2206F41-003a | 0.025 | 0.05 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | DUP-6-28-22 | 2206F41-008a | 0.025 | 0.05 | mg/L | U | EBD, MDLRL |
| TPH GRO | SW8015 | EB-6-28-22 | 2206F41-001a | 0.01 | 0.05 | mg/L | J | MDLRL |
| TPH MRO | SW8015 | MKTF-29 | 2206F41-003C | 0.57 | 0.08 | mg/L | J | ERPD-FD |
| TPH MRO | SW8015 | DUP-6-28-22 | 2206F41-008C | ND | 0.08 | mg/L | UJ | ERPD-FD |
| Trichloroethene | SW8260B | MKTF-30 | 2206f41-002a | 0.93 | 1 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-30 | 2206F41-002E | 0.0041 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-29 | 2206F41-003E | 0.0064 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OPIS-1 | 2206F41-004E | 0.023 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1-NM | 2206F41-005E | 0.039 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-12A | 2206F41-006E | 0.004 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-70 | 2206F41-007E | 0.0018 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-28-22 | 2206F41-008E | 0.0064 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-30 | 2206F41-002D | 0.044 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-29 | 2206F41-003D | 0.0073 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OPIS-1 | 2206F41-004D | 0.037 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | STP-1-NM | 2206F41-005D | 0.038 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-12A | 2206F41-006D | 0.032 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-70 | 2206F41-007D | 0.013 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-28-22 | 2206F41-008D | 0.0072 | 0.05 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OPIS-1 | 2206F41-004E | 0.032 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-12A | 2206F41-006E | 0.014 | 0.01 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-30 | 2206F41-002E | 0.0063 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-29 | 2206F41-003E | 0.0087 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | STP-1-NM | 2206F41-005E | 0.0089 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-70 | 2206F41-007E | 0.0097 | 0.01 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-28-22 | 2206F41-008E | 0.0086 | 0.01 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | EB-6-28-22 | 2206F41-001E | 0.0038 | 0.01 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-28-22 | 2206F41-008D | 0.0082 | 0.01 | mg/L | J | MDLRL |



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/29/2022 |
| Date Validated: 01/24/2023 | Sample End Date: 06/29/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206G22 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-29-22 | 2206G22-001 |
| MKTF-44 | 2206G22-002 |
| OW-57 | 2206G22-003 |
| OW-58 | 2206G22-004 |
| OW-58A | 2206G22-005 |
| DUP-6-29-22 | 2206G22-006 |
| FB-6-29-22 | 2206G22-007 |
| Trip Blank | 2206G22-008 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 450 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C: The laboratory control spike duplicate (LCSD) for Method 8270 had a low recovery for pyrene. The laboratory control spike (LCS) had acceptable recovery.

Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270 SIM, depending which method needs the least dilution.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present nor required on the coolers because the samples were transferred to a courier for delivery to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|---------------------------|----------------------------|-----------------|
| 200.7 | OW-57 | Dissolved Barium | 5 |
| 200.7 | OW-58A | Dissolved and Total Barium | 5 |
| 200.8 | OW-57 | Select Total Metals | 5 |
| 245.1 | OW-58A | Total Mercury | 5 |
| 200.7 | OW-58, DUP-6-29-22 | Dissolved and Total Barium | 10 |
| 8015D | OW-57, OW-58, DUP-6-29-22 | DRO and MRO | 10 |
| 200.7 | OW-57 | Total Metals | 20 |
| 200.8 | OW-57 | Total Lead | 20 |
| 8015D | OW-58A | GRO | 20 |
| 8015D | OW-57, OW-58, DUP-6-29-22 | GRO | 50 |
| 8260B | Multiple Samples | Select VOCs | 50 |
| 200.7 | OW-57 | Total Barium | 100 |
| 8260B | Multiple Samples | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 1.3°C, 2.3°C, and 3.6°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.4°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> <p>The laboratory noted that additional nitric acid preservative was added to samples OW-57 and OW-58A to adjust the pH to meet the method requirement. Validation action was not required.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 68495 at a concentration of 0.023 mg/L. TPH DRO was detected in samples EB-6-29-22 and MKTF-44 at concentrations less than the laboratory reporting limit and the results were assigned U qualifiers. The TPH DRO results in the remaining associated samples were greater than ten times the blank concentration and did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batch. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|-----------------------|
| 200.7 | Total Metals | 68545 | EB-6-29-22, MKTF-44 |
| 200.7 | Dissolved Metals | A89290 | Not Prepared |
| 200.7 | Dissolved Barium | A89335 | Not Prepared |
| 200.7 | Dissolved Barium | B89506 | Not Prepared |
| 200.7 | Dissolved Barium | C89417 | OW-58A |
| 200.8 | Total Metals | 68545 | Not Prepared |
| 200.8 | Dissolved Metals | A89215 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68622 | OW-58A |
| 504.1 | EDB | 68565 | Not Prepared |
| 504.1 | EDB | 68566 | Not Prepared |
| 4500CN E | Cyanide | WG1889913 | Not Associated |
| 4500CN E | Cyanide | WG1893803 | OW-57, Not Associated |
| 8015D | TPH DRO and MRO | 68495 | Not Prepared |
| 8015D | GRO | G89271 | MKTF-44 |
| 8260B | VOC | R89230 | MKTF-44 |
| 8260B | VOC | R89347 | Not Prepared |
| 8270C SIM | SVOC | 68493 | Not Prepared |
| 8270C | SVOC | 68493 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exception.

The MSD recovery for cyanide in Method 4500CN E batch WG1893803 was outside the laboratory QC limits of 90.0-110% at 87.5%. However, the recoveries were within data validation limits of 75-125%. Validation action was not required.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 68545 | 132% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Barium | C89417 | 60.7% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Nickel | A89290 | 61.8% | ----- | 70-130% | ----- | ----- |
| 8015D | DRO | 68495 | 75.5% | 78.6% | 31.7-75.4% | Acceptable | 20% |
| 8270C | Acenaphthene | 68493 | Acceptable | Acceptable | 21.3-104% | 53.0% | 45.3% |
| 8270C | 1,4-Dichlorobenzene | 68493 | Acceptable | Acceptable | 15-89.8% | 49.3% | 39.6% |
| 8270C | Phenol | 68493 | Acceptable | Acceptable | 17-61.1% | 55.7% | 42.5% |
| 8270C | Pyrene | 68493 | Acceptable | 55.4% | 61-123% | 30.2% | 11.8% |
| 8270C SIM | 1,4-Dioxane | 68493 | 49.0% | Acceptable | 20.2-48.4% | 86.5% | 30.1% |
| 8270C SIM | Naphthalene | 68493 | Acceptable | Acceptable | 21.3-79.9% | 87.9% | 25.6% |
| 8270C SIM | 1-Methylnaphthalene | 68493 | Acceptable | Acceptable | 22.2-80.3% | 80.4% | 25% |
| 8270C SIM | 2-Methylnaphthalene | 68493 | Acceptable | Acceptable | 20.6-80.1% | 76.6% | 25% |
| 8270C SIM | Acenaphthene | 68493 | Acceptable | Acceptable | 29.8-82.7% | 80.3% | 27.8% |
| 8270C SIM | Fluorene | 68493 | Acceptable | Acceptable | 33.3-86% | 56.5% | 26.4% |
| 8270C SIM | Phenanthrene | 68493 | Acceptable | Acceptable | 38.2-93.9% | 33.3% | 27.9% |
| 8270C SIM | Chrysene | 68493 | Acceptable | Acceptable | 55.3-115% | 34.7% | 20% |

The target analytes total nickel and DRO were detected in the associated samples, and the results were qualified as J+ based on the evidence of potential high bias. Non-detections of total nickel and 1,4-dioxane in the associated samples did not require qualification based on the evidence of potential high bias.

Detections of the analytes with LCS and/or LCSD recoveries less than the lower QC limits in the associated samples were qualified as J- due to evidence of potential low bias. Non-detections of these analytes in the associated samples were qualified as UJ.

The analytes with LCS/LCSD RPD values that exceeded the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|-------------|--------------------|------------|
| 8270C | 2-Fluorophenol | DUP-6-29-22 | 10.4% | 29.4-87.7% |
| 8270C | 2,4,6-Tribromophenol | DUP-6-29-22 | 4.47% | 18.6-129% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | OW-58 | 71.8% | 72.3-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | DUP-6-29-22 | 67.6% | 72.3-147% |

Since Method 8270C and 8270C-SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C-SIM analysis of samples OW-58 and DUP-6-9-22, and qualification of sample data was not required.

Phenol was detected in sample DUP-6-29-22 and this result was qualified as J-. The remaining SVOC target analytes were not detected in sample DUP-6-29-22, and these results were qualified as UJ, due to the evidence of potential low bias.

The DRO and MRO results for samples OW-57, OW-58, and DUP-6-9-22 were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-29-22, and one equipment blank sample, EB-6-29-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|----------------|---------------|
| Trip Blank | 8260B | Acetone | 13 µg/L |
| EB-6-29-22 | 200.7 | Dissolved Zinc | 0.0098 mg/L |
| EB-6-29-22 | 8015D | DRO | 0.025 mg/L |
| EB-6-29-22 | 8260B | Acetone | 8.6 µg/L |

Detections of acetone and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. The detections of dissolved zinc in the associated samples that were greater than or equal to the reporting limit but less than 10 times the blank result was assigned JB qualifiers. Non-detections of acetone in the associated samples did not require qualification.

The DRO results for the samples in batch 68495 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.



VALIDATION CRITERIA CHECKLIST

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-6-29-22 was collected as a field duplicate of sample OW-58.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

RPD value for phenol exceeded the data validation limit of 30% at 45.6%. The phenol results for samples OW-58 and DUP-6-29-22 were assigned J qualifiers due to evidence of poor precision.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1889913 | Not Associated |
| 4500CN E | Cyanide | WG1893803 | OW-57, Not Associated |

The RPD for the laboratory duplicate prepared from sample OW-57 was not applicable since the results for both measurements were not detected.

The RPD values for laboratory duplicate samples prepared from non-project samples were evaluated and considered but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| EB-6-29-22 | Zinc | ND | 0.0098 |
| DUP-6-29-22 | Zinc | 0.0060 | 0.011 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-58
Field Duplicate Sample ID: DUP-6-29-22 | | | | |
|---|----------------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 5.1 mg/L | 5.0 mg/L | 2.0% |
| Barium, Total | E 200.7 | 5.5 mg/L | 5.6 mg/L | 1.8% |
| Cobalt, Total | E 200.7 | ND (0.0060 mg/L) | 0.0039 mg/L | DL |
| Nickel, Dissolved | E 200.7 | 0.050 mg/L | 0.051 mg/L | 2.0% |
| Nickel, Total | E 200.7 | 0.058 mg/L | 0.055 mg/L | 5.3% |
| Vanadium, Dissolved | E 200.7 | 0.0031 mg/L | 0.0033 mg/L | 6.3% +/-RL |
| Vanadium, Total | E 200.7 | 0.0049 mg/L | 0.004 mg/L | 20.2% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | 0.011 mg/L | 0.0% +/-RL |
| Zinc, Total | E 200.7 | 0.014 mg/L | 0.006 mg/L | 80.0% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0035 mg/L | 0.0034 mg/L | 2.9% |
| Arsenic, Total | E200.8 | 0.0039 mg/L | 0.0039 mg/L | 0.0% |
| Lead, Total | E200.8 | 0.00039 mg/L | 0.00024 mg/L | 47.6% +/-RL |
| TPH DRO | SW8015 | 5.9 mg/L | 5.2 mg/L | 12.6% |
| TPH GRO | SW8015 | 74 mg/L | 77 mg/L | 4.0% |
| 1,2,4-Trimethylbenzene | SW8260B | 9.6 µg/L | 9.6 µg/L | 0.0% +/-RL |
| Benzene | SW8260B | 28,000 µg/L | 27,000 µg/L | 3.6% |
| Ethylbenzene | SW8260B | 1,200 µg/L | 1,200 µg/L | 0.0% |
| Isopropylbenzene | SW8260B | 31 µg/L | 30 µg/L | 3.3% +/-RL |
| MTBE | SW8260B | 1000 µg/L | 1000 µg/L | 0.0% |
| n-Butylbenzene | SW8260B | 15 µg/L | 14 µg/L | 6.9% +/-RL |
| n-Propylbenzene | SW8260B | 95 µg/L | 93 µg/L | 2.1% +/-RL |
| sec-Butylbenzene | SW8260B | 7.3 µg/L | ND (50 µg/L) | DL |
| Toluene | SW8260B | 39 µg/L | 40 µg/L | 2.5% +/-RL |
| Xylenes, Total | SW8260B | 130 µg/L | 140 µg/L | 7.4% +/-RL |
| 1-Methylnaphthalene | SW8270C | 68 µg/L | 65 µg/L | 4.5% |
| 2-Methylnaphthalene | SW8270C | 77 µg/L | 73 µg/L | 5.3% |
| Acenaphthene | SW8270C | 2.7 µg/L | 2.2 µg/L | 20.4% |
| Anthracene | SW8270C | 0.40 µg/L | 0.30 µg/L | 28.6% +/-RL |
| Fluoranthene | SW8270C | 0.24 µg/L | 0.22 µg/L | 8.7% +/-RL |
| Fluorene | SW8270C | 3.7 µg/L | 2.9 µg/L | 24.2% |
| Naphthalene | SW8270C | 140 µg/L | 130 µg/L | 7.4% |
| Phenanthrene | SW8270C | 3.3 µg/L | 2.5 µg/L | 27.6% |
| Phenol | SW8270C | 70 µg/L | 44 µg/L | 45.6% |
| Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020. | | | | |
| DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL). | | | | |



+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

RPD value for phenol exceeded the data validation limit of 30% at 45.6%, which was evidence of poor precision. The phenol results were qualified as J for samples OW-58 and DUP-6-29-22.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | OW-58 | 2206G22-004A | 9.6 | 50 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP-6-29-22 | 2206G22-006A | 9.6 | 50 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | OW-58A | 2206G22-005A | 45 | 50 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | EB-6-29-22 | 2206G22-001C | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | MKTF-44 | 2206G22-002C | ND | 50 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-57 | 2206G22-003C | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-58 | 2206G22-004C | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-58A | 2206G22-005C | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-44 | 2206g22-002c | ND | 10 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | OW-57 | 2206G22-003C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | OW-58 | 2206G22-004C | ND | 1.0 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | OW-58A | 2206G22-005C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-57 | 2206G22-003C | 96 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-58 | 2206G22-004C | 68 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-58A | 2206G22-005C | 100 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-6-29-22 | 2206G22-006C | 65 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| 2,4,6-Trichlorophenol | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylnaphthalene | SW8270C | OW-57 | 2206G22-003C | 71 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-58 | 2206G22-004C | 77 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-58A | 2206G22-005C | 97 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-6-29-22 | 2206G22-006C | 73 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| 2-Methylphenol | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 10 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-58A | 2206G22-005C | 9.5 | 10 | µg/L | J | MDLRL |
| 3,4-Methylphenol | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 10 | µg/L | UJ | LR-SUR |
| Acenaphthene | SW8270C | OW-57 | 2206G22-003C | 3.0 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | OW-58 | 2206G22-004C | 2.7 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | OW-58A | 2206G22-005C | 4.2 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-6-29-22 | 2206G22-006C | 2.2 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| Acetone | SW8260B | EB-6-29-22 | 2206G22-001A | 8.6 | 10 | µg/L | U | MDLRL, TBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| Anthracene | SW8270C | OW-57 | 2206G22-003C | 0.20 | 0.30 | µg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | MKTF-44 | 2206G22-002E | 0.035 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | OW-58A | 2206G22-005E | 1.0 | 0.010 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | EB-6-29-22 | 2206G22-001E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Total | E 200.7 | OW-57 | 2206G22-003D | 0.029 | 0.040 | mg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | MKTF-44 | 2206G22-002E | 0.0024 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-58A | 2206G22-005D | 0.0035 | 0.0060 | mg/L | J | MDLRL |
| Chrysene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-57 | 2206G22-003C | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-58 | 2206G22-004C | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-58A | 2206G22-005C | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Cobalt, Dissolved | E 200.7 | OW-57 | 2206G22-003E | 0.0026 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | DUP-6-29-22 | 2206G22-006D | 0.0039 | 0.0060 | mg/L | J | MDLRL |
| Fluoranthene | SW8270C | OW-58 | 2206G22-004C | 0.24 | 0.30 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | OW-58A | 2206G22-005C | 0.26 | 0.30 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | DUP-6-29-22 | 2206G22-006C | 0.22 | 0.30 | µg/L | J | MDLRL |
| Fluorene | SW8270C | OW-57 | 2206G22-003C | 5.3 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | OW-58 | 2206G22-004C | 3.7 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | OW-58A | 2206G22-005C | 5.9 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | DUP-6-29-22 | 2206G22-006C | 2.9 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | OW-57 | 2206G22-003A | 14 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-58 | 2206G22-004A | 31 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-58A | 2206G22-005A | 32 | 50 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Isopropylbenzene | SW8260B | DUP-6-29-22 | 2206G22-006A | 30 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-44 | 2206G22-002E | 0.00032 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-58 | 2206G22-004D | 0.00039 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-6-29-22 | 2206G22-006D | 0.00024 | 0.00050 | mg/L | J | MDLRL |
| MTBE | SW8260B | OW-57 | 2206G22-003A | 31 | 50 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-57 | 2206G22-003C | 130 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-58 | 2206G22-004C | 140 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-58A | 2206G22-005C | 190 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | DUP-6-29-22 | 2206G22-006C | 130 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| n-Butylbenzene | SW8260B | OW-58 | 2206G22-004A | 15 | 150 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-58A | 2206G22-005A | 15 | 150 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP-6-29-22 | 2206G22-006A | 14 | 150 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-57 | 2206G22-003E | 0.057 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-58 | 2206G22-004E | 0.050 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-58A | 2206G22-005E | 0.036 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | DUP-6-29-22 | 2206G22-006E | 0.051 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | EB-6-29-22 | 2206G22-001E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | MKTF-44 | 2206G22-002E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-57 | 2206G22-003D | 0.31 | 0.20 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-58 | 2206G22-004D | 0.058 | 0.01 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-58A | 2206G22-005D | 0.040 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | DUP-6-29-22 | 2206G22-006D | 0.055 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | MKTF-44 | 2206G22-002D | 0.0081 | 0.010 | mg/L | J+ | HR-LCS, MDLRL |
| n-Propylbenzene | SW8260B | OW-57 | 2206G22-003A | 34 | 50 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | OW-57 | 2206G22-003C | 7.3 | 0.30 | µg/L | J | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|---------------------------|
| Phenanthrene | SW8270C | OW-58 | 2206G22-004C | 3.3 | 0.30 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | OW-58A | 2206G22-005C | 5.0 | 0.30 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | DUP-6-29-22 | 2206G22-006C | 2.5 | 0.30 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | MKTF-44 | 2206g22-002c | ND | 3.0 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-58 | 2206G22-004C | 70 | 20 | µg/L | J | ERPD-FD, ERPD-LCS |
| Phenol | SW8270C | DUP-6-29-22 | 2206G22-006C | 44 | 20 | µg/L | J- | ERPD-FD, ERPD-LCS, LR-SUR |
| Phenol | SW8270C | OW-57 | 2206G22-003C | 110 | 20 | µg/L | J | ERPD-LCS |
| Phenol | SW8270C | OW-58A | 2206G22-005C | 21 | 20 | µg/L | J | ERPD-LCS |
| Phenol | SW8270C | EB-6-29-22 | 2206G22-001C | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-44 | 2206G22-002C | ND | 200 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | EB-6-29-22 | 2206g22-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS, LR-LCS |
| Pyrene | SW8270C | MKTF-44 | 2206g22-002c | ND | 10 | µg/L | UJ | ERPD-LCS, LR-LCS |
| Pyrene | SW8270C | OW-57 | 2206G22-003C | ND | 1.0 | µg/L | UJ | ERPD-LCS, LR-LCS |
| Pyrene | SW8270C | OW-58 | 2206G22-004C | ND | 1.0 | µg/L | UJ | ERPD-LCS, LR-LCS |
| Pyrene | SW8270C | OW-58A | 2206G22-005C | ND | 1.0 | µg/L | UJ | ERPD-LCS, LR-LCS |
| Pyrene | SW8270C | DUP-6-29-22 | 2206G22-006C | ND | 1.0 | µg/L | UJ | ERPD-LCS, LR-LCS |
| sec-Butylbenzene | SW8260B | OW-58 | 2206G22-004A | 7.3 | 50 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-58A | 2206G22-005A | 7.9 | 50 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-58A | 2206G22-005E | 0.00041 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-58A | 2206G22-005D | 0.00053 | 0.0010 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-57 | 2206G22-003A | 28 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-58 | 2206G22-004A | 39 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | DUP-6-29-22 | 2206G22-006A | 40 | 50 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-57 | 2206G22-003C | 4.7 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-58 | 2206G22-004C | 5.9 | 0.64 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| TPH DRO | SW8015 | OW-58A | 2206G22-005C | 3.2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | DUP-6-29-22 | 2206G22-006C | 5.2 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | EB-6-29-22 | 2206G22-001C | 0.025 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-44 | 2206G22-002C | 0.042 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-57 | 2206G22-003E | 0.0029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-58 | 2206G22-004E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-29-22 | 2206G22-006E | 0.0033 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-57 | 2206G22-003D | 0.43 | 1.0 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58 | 2206G22-004D | 0.0049 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58A | 2206G22-005D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-29-22 | 2206G22-006D | 0.004 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-44 | 2206G22-002E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-58 | 2206G22-004E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-58A | 2206G22-005E | 0.015 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-6-29-22 | 2206G22-006E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-57 | 2206G22-003E | 0.0078 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-29-22 | 2206G22-001E | 0.0098 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-29-22 | 2206G22-006D | 0.0060 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/08/2022 |
| Date Validated: 09/20/2022 | Sample End Date: 06/08/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Per- and Polyfluorinated Alkyl Substances (PFAS) by Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS) and Isotope Dilution (ID) | |
| Laboratory Project ID: 2206528 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, and from Vista Analytical Laboratory of El Dorado Hills, California, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-8-22 | 2206528-001 |
| OW-63 | 2206528-002 |
| OW-64 | 2206528-003 |
| OW-10 | 2206528-004 |
| FB-6-8-22 | 2206528-005 |
| DUP-6-8-22 | 2206528-006 |
| Trip Blank | 2206528-007 |
| Equipment Blank | 2206528-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 384 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8015D DRO/MRO: The Laboratory control spike had elevated recovery that was due to laboratory error. The Laboratory control spike duplicate had acceptable recoveries.

Method 8270C: Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270 SIM, depending which method needs the least dilution. In this report naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM for sample OW-63.

PFAS Isotope Dilution Method: Sample "OW-63" contained particulate and was centrifuged prior to extraction.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------|----------------------------|------------------------|
| 200.7 | OW-63 | Dissolved Barium | 5 |
| 200.8 | OW-64 | Total Arsenic and Selenium | 5 |
| 200.7 | OW-63 | Total Barium | 10 |
| 8260B | OW-10 | Methylene Chloride | 10 |
| 8015D | OW-63 | TPH GRO | 50 |
| 8260B | OW-63 | Select VOCs | 50 |
| 8260B | OW-63 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of 4°C ± 2°C at 3.5°C, 3.8°C, and 3.9°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.7°C as noted on the CoC. Samples transferred to Vista were received in good condition with the cooler temperature outside the recommended range at 1.1°C as noted on the <i>Sample Log-in Checklist</i>. The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of nanograms per liter (ng/L), micrograms per liter (µg/L), and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 68038 at a concentration of 0.029 mg/L. The sample EB-6-8-22 TPH DRO result detected below the laboratory reporting limit was qualified with a U flag. Samples DUP-6-8-22 and OW-10 TPH DRO results greater than the blank detection and/or the laboratory reporting limit but less than 10 times the blank concentration were qualified with a JB flag. Detections of this analyte greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 68127 | EB-6-8-22 |
| 200.7 | Dissolved Metals | B88662 | Not Prepared |
| 200.8 | Total Metals | 68127 | OW-64 |
| 200.8 | Dissolved Metals | A88688 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68088 | Not Prepared |
| 504.1 | EDB | 68078 | Not Prepared |
| 4500CN E | Cyanide | WG1882735 | Not Associated |
| 8015D | TPH DRO and MRO | 68038 | Not Prepared |
| 8015D | TPH GRO | A88732 | EB-6-8-22 |
| 8260B | Methylene Chloride | A88912 | Not Prepared |
| 8260B | VOCs | R88822 | OW-64 |
| 8270C and 8270C SIM | SVOCs | 68135 | Not Prepared |
| PFAS Method | PFAs | B22F113 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|--------------|-----------------------|---------------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Cobalt | 68127 | 133% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Zinc | B88662 | 144% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68038 | 642% | 77.6% | 31.7-75.4% | 157% | 20% |

Dissolved zinc and TPH DRO were detected in the associated samples, and these results were qualified as J+ due to evidence of potential high bias. Non-detections of total cobalt in the associated samples did not require qualification.

TPH DRO was detected in the associated samples, and these results were qualified as J due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exception.

The Method 8015D surrogate BFB was recovered in sample OW-64 outside the acceptance limits of 70-130% at 288%. The associated target analyte (TPH GRO) was detected in sample OW-64 and was assigned a J+ qualifier due to evidence of potential high bias.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample FB-6-8-22, and two equipment blank samples, EB-6-8-22 and Equipment Blank, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|------------------|--------------|-----------------------|--------------------|
| EB-6-8-22 | 8015D | TPH DRO | 0.044 mg/L |
| EB-6-8-22 | 8270 SIM | 1,4-Dioxane | 0.30 µg/L |
| EB-6-8-22 | 200.7 | Dissolved Zinc | 0.0068 mg/L |

Detections of dissolved zinc in the associated samples that were less than the blank result and less than the applicable reporting limits were assigned U qualifiers. The detection of dissolved zinc in the associated sample OW-63 that was greater than the reporting limit but less than 10 times the blank result was assigned a JB qualifier. Non-detections of 1,4-dioxane in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results in batch 68038 were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the equipment blank contamination was not required.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | Yes |
| Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-8-22 was collected as a field duplicate of sample OW-10. | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | Yes |
| Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples. | |

VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1882735 | Not Associated |
| 4500CN E | Cyanide | WG1882735 | EB-6-8-22 |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for laboratory duplicates prepared from project samples were not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-63 | Antimony | ND | 0.00061 |
| OW-10 | Cobalt | ND | 0.0039 |
| DUP-6-8-22 | Cobalt | ND | 0.0028 |
| OW-63 | Vanadium | ND | 0.0027 |
| EB-6-8-22 | Zinc | ND | 0.0068 |
| OW-63 | Zinc | ND | 0.014 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-10
Field Duplicate Sample ID: DUP-6-8-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.046 mg/L | 0.045 mg/L | 2.2% |
| Barium, Total | E 200.7 | 0.057 mg/L | 0.055 mg/L | 3.6% |
| Cobalt, Dissolved | E 200.7 | 0.0039 mg/L | 0.0028 mg/L | 32.8% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0055 mg/L | 0.0063 mg/L | 13.6% +/-RL |
| Vanadium, Total | E 200.7 | 0.0061 mg/L | 0.0067 mg/L | 9.4% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0056 mg/L | 0.0066 mg/L | 16.4% +/-RL |
| Zinc, Total | E 200.7 | 0.0081 mg/L | 0.0071 mg/L | 13.2% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.00065 mg/L | 0.00067 mg/L | 3.0% +/-RL |
| Arsenic, Total | E200.8 | 0.0011 mg/L | 0.0011 mg/L | 0.0% +/-RL |
| Lead, Dissolved | E200.8 | 0.00008 mg/L | 0.000074 mg/L | 7.8% +/-RL |
| Lead, Total | E200.8 | 0.00021 mg/L | 0.00021 mg/L | 0.0% +/-RL |
| Selenium, Dissolved | E200.8 | 0.010 mg/L | 0.011 mg/L | 9.5% |
| Selenium, Total | E200.8 | 0.013 mg/L | 0.012 mg/L | 8.0% |
| TPH DRO | SW8015 | 0.12 mg/L | 0.091 mg/L | 27.5% +/-RL |
| TPH GRO | SW8015 | 0.012 mg/L | 0.012 mg/L | 0.0% +/-RL |
| 1,1-Dichloroethane | SW8260B | 1.0 µg/L | ND (1.0 µg/L) | DL |
| Methylene Chloride | SW8260B | 47 µg/L | ND (3.0 µg/L) | DL |
| MTBE | SW8260B | 7.1 µg/L | 7.3 µg/L | 2.8% |
| 1,4-Dioxane | SW8270C | 3.3 µg/L | 3.1 µg/L | 6.3% |
| Pyrene | SW8270C | ND (1.0 µg/L) | 0.60 µg/L | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | EB-6-8-22 | 2206528-001c | 0.30 | 1.0 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | OW-64 | 2206528-003c | 0.16 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-64 | 2206528-003c | 0.22 | 0.30 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | OW-63 | 2206528-002E | 0.00061 | 0.0010 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-10 | 2206528-004E | 0.00065 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-8-22 | 2206528-006E | 0.00067 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-64 | 2206528-003D | 0.0026 | 0.0050 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-64 | 2206528-003D | 0.0033 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-10 | 2206528-004E | 0.0039 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | DUP-6-8-22 | 2206528-006E | 0.0028 | 0.0060 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-64 | 2206528-003E | 0.000080 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-10 | 2206528-004E | 0.000080 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-6-8-22 | 2206528-006E | 0.000074 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-63 | 2206528-002D | 0.000076 | 0.00050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|------------------------------|
| Lead, Total | E200.8 | OW-10 | 2206528-004D | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-6-8-22 | 2206528-006D | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Pyrene | SW8270C | DUP-6-8-22 | 2206528-006c | 0.60 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-63 | 2206528-002a | 8.3 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-63 | 2206528-002a | 46 | 50 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-63 | 2206528-002C | 3.5 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-64 | 2206528-003C | 0.40 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-10 | 2206528-004C | 0.12 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | DUP-6-8-22 | 2206528-006C | 0.091 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | EB-6-8-22 | 2206528-001C | 0.044 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | OW-64 | 2206528-003A | 0.53 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-10 | 2206528-004A | 0.012 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | DUP-6-8-22 | 2206528-006A | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-63 | 2206528-002E | 0.0027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-64 | 2206528-003E | 0.0035 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-10 | 2206528-004E | 0.0055 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-8-22 | 2206528-006E | 0.0063 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-64 | 2206528-003D | 0.0080 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-10 | 2206528-004D | 0.0061 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-8-22 | 2206528-006D | 0.0067 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-8-22 | 2206528-001E | 0.0068 | 0.010 | mg/L | J+ | HR-LCS, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-63 | 2206528-002E | 0.014 | 0.010 | mg/L | JB | FBD, HR-LCS |
| Zinc, Dissolved | E 200.7 | OW-64 | 2206528-003E | 0.0054 | 0.010 | mg/L | U | FBD, HR-LCS, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| Zinc, Dissolved | E 200.7 | OW-10 | 2206528-004E | 0.0056 | 0.010 | mg/L | U | FBD, HR-LCS, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-8-22 | 2206528-006E | 0.0066 | 0.010 | mg/L | U | FBD, HR-LCS, MDLRL |
| Zinc, Total | E 200.7 | OW-64 | 2206528-003D | 0.0057 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-10 | 2206528-004D | 0.0081 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-8-22 | 2206528-006D | 0.0071 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/09/2022 |
| Date Validated: 12/27/2022 | Sample End Date: 06/09/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206602 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-9-22 | 2206602-001 |
| BW-5C | 2206602-002 |
| OW-50 | 2206602-003 |
| OW-52 | 2206602-004 |
| OW-29 | 2206602-005 |
| OW-13 | 2206602-006 |
| FB-6-9-22 | 2206602-007 |
| DUP-6-9-22 | 2206602-008 |
| BW-5B | 2206602-009 |
| Trip Blank | 2206602-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C: Sample OW-29 had poor surrogate recoveries due to the emulsive nature of the sample.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

J – The identification of the analyte is acceptable; the reported value is an estimate.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

S – % Recovery outside of range due to dilution or matrix interference.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present nor required on the coolers because the samples were transferred to a courier for delivery to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|---------------------|-----------------------------------|------------------------|
| 200.8 | OW-29, OW-52, BW-5C | Select Dissolved and Total Metals | 5 |
| 8260B | EB-6-9-22 | Methylene Chloride | 10 |
| 8260B | OW-29 | MTBE | 100 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.5°C and 5.8°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 5.9°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.



| VALIDATION CRITERIA CHECKLIST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------|-----------|------------------|--------|----------|-------|------------------|-------|--------------|-------|-------|-------|------------------|--------|--------------|-------|------------------|--------|-----------|-------|--------------|-------|-------|-------|------------------|--------|--------------|-------|------------------|--------|------------------|-------|-----------------------------|-------|-------|-------|-----|-------|--------------|----------|---------|-----------|----------------|-------|-----------------|-------|--------------|-------|-----|--------|-----------|
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.
TPH DRO was detected in the laboratory blank for Method 8015D batch 68123 at a concentration of 0.021 mg/L. Sample results detected below the blank concentration and/or the laboratory reporting limit were qualified with a U flag. The TPH DRO result for sample BW-5C was greater than the laboratory reporting limit but less than or equal to 10 times the blank concentration and was assigned a JB qualifier. The TPH DRO results in the associated samples OW-29 and OW-52 were greater than ten times the blank concentration and did not require qualification. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Method</th> <th>Analytes</th> <th>Batch</th> <th>MS Sample Source</th> </tr> </thead> <tbody> <tr> <td>200.7</td> <td>Total Metals</td> <td>68127</td> <td>BW-5B</td> </tr> <tr> <td>200.7</td> <td>Dissolved Metals</td> <td>A88751</td> <td>Not Prepared</td> </tr> <tr> <td>200.7</td> <td>Dissolved Metals</td> <td>B88784</td> <td>EB-6-9-22</td> </tr> <tr> <td>200.8</td> <td>Total Metals</td> <td>68127</td> <td>OW-29</td> </tr> <tr> <td>200.8</td> <td>Dissolved Metals</td> <td>B88918</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Dissolved Metals</td> <td>C88688</td> <td>EB-6-9-22, BW-5C</td> </tr> <tr> <td>245.1</td> <td>Total and Dissolved Mercury</td> <td>68089</td> <td>BW-5B</td> </tr> <tr> <td>504.1</td> <td>EDB</td> <td>68078</td> <td>Not Prepared</td> </tr> <tr> <td>4500CN E</td> <td>Cyanide</td> <td>WG1882743</td> <td>Not Associated</td> </tr> <tr> <td>8015D</td> <td>TPH DRO and MRO</td> <td>68123</td> <td>Not Prepared</td> </tr> <tr> <td>8015D</td> <td>GRO</td> <td>C88732</td> <td>EB-6-9-22</td> </tr> </tbody> </table> | | | | Method | Analytes | Batch | MS Sample Source | 200.7 | Total Metals | 68127 | BW-5B | 200.7 | Dissolved Metals | A88751 | Not Prepared | 200.7 | Dissolved Metals | B88784 | EB-6-9-22 | 200.8 | Total Metals | 68127 | OW-29 | 200.8 | Dissolved Metals | B88918 | Not Prepared | 200.8 | Dissolved Metals | C88688 | EB-6-9-22, BW-5C | 245.1 | Total and Dissolved Mercury | 68089 | BW-5B | 504.1 | EDB | 68078 | Not Prepared | 4500CN E | Cyanide | WG1882743 | Not Associated | 8015D | TPH DRO and MRO | 68123 | Not Prepared | 8015D | GRO | C88732 | EB-6-9-22 |
| Method | Analytes | Batch | MS Sample Source | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Total Metals | 68127 | BW-5B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Dissolved Metals | A88751 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Dissolved Metals | B88784 | EB-6-9-22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Total Metals | 68127 | OW-29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Metals | B88918 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Metals | C88688 | EB-6-9-22, BW-5C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 245.1 | Total and Dissolved Mercury | 68089 | BW-5B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 504.1 | EDB | 68078 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4500CN E | Cyanide | WG1882743 | Not Associated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8015D | TPH DRO and MRO | 68123 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8015D | GRO | C88732 | EB-6-9-22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|--------------------|--------|------------------|
| 8260B | MTBE | A88912 | Not Prepared |
| 8260B | Methylene Chloride | A88962 | Not Prepared |
| 8260B | VOC | R88822 | Not Prepared |
| 8270C SIM | SVOC | 68135 | Not Prepared |
| 8270C | SVOC | 68135 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCS/LCSD QC Limits |
|--------|------------------|--------|--------------|--------------------|
| 200.7 | Total Cobalt | 68127 | 133% | 70-130% |
| 200.7 | Dissolved Nickel | B88784 | 64.9% | 70-130% |

Total cobalt was detected in the associated sample BW-5C, and this result was qualified as J+ due to evidence of potential high bias. The remaining associated total cobalt results were non-detections, and qualification of data was not required.

Dissolved nickel was not detected in the associated sample EB-6-9-22. This result was qualified as UJ due to evidence of potential low bias.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------------|--------|--------------------|------------|
| 8270C | 2-Fluorophenol | OW-29 | 20.4% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-29 | 16.6% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | OW-29 | 26.7% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | OW-29 | 26.7% | 38.1-99.9% |

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of sample OW-29, and qualification of sample data was not required. **Di-n-butyl phthalate was detected in the Method 8270C analysis of sample OW-29, and this result was qualified as J- to indicate a potential low bias. The remaining Method 8270C SVOC results for sample OW-29 were non-detections, and these results were qualified as UJ due to the evidence of potential low bias.**

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-6-9-22, and one equipment blank sample, EB-6-9-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|--------------------|---------------|
| EB-6-9-22 | 200.7 | Dissolved Zinc | 0.0065 mg/L |
| EB-6-9-22 | 8015D | TPH DRO | 0.017 mg/L |
| EB-6-9-22 | 8260B | Methylene Chloride | 370 µg/L |

Detections of dissolved zinc and methylene chloride in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. The detections of dissolved zinc in the associated samples OW-50 and OW-52 that were greater than the reporting limit but less than 10 times the blank result were assigned JB qualifiers. Non-detections of methylene chloride in the associated samples and dissolved zinc results greater than ten times the blank concentration did not require qualification.

The TPH DRO results for the samples in batch 68123 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-6-9-22 was collected as a field duplicate of sample BW-5B.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for MTBE exceeded the data validation limit of 30% at 53.2%, which was evidence of poor precision. The MTBE results were qualified as J for samples BW-5B and DUP-6-9-22.

An RPD value could not be calculated for methylene chloride for the field duplicate pair BW-5B and DUP-6-9-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, methylene chloride was qualified as J and UJ for the parent and duplicate samples, respectively.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1882743 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-29 | Antimony | ND | 0.00067 |
| BW-5B | Antimony | ND | 0.00070 |
| OW-29 | Arsenic | ND | 0.00046 |
| OW-29 | Barium | 0.082 | 0.085 |
| BW-5B | Lead | ND | 0.000064 |
| BW-5C | Selenium | ND | 0.00040 |
| OW-13 | Vanadium | ND | 0.0031 |
| BW-5B | Vanadium | 0.0092 | 0.0096 |
| OW-29 | Zinc | ND | 0.12 |
| OW-52 | Zinc | ND | 0.013 |
| OW-13 | Zinc | 0.0045 | 0.0076 |
| DUP-6-9-22 | Zinc | ND | 0.0075 |
| BW-5B | Zinc | ND | 0.0096 |
| EB-6-9-22 | Zinc | ND | 0.0065 |
| BW-5C | Zinc | 0.0065 | 0.0086 |
| OW-50 | Zinc | 0.0043 | 0.011 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: BW-5B
Field Duplicate Sample ID: DUP-6-9-22 | | | | |
|--|----------------|-------------------|----------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.26 mg/L | 0.27 mg/L | 3.8% |
| Barium, Total | E 200.7 | 0.28 mg/L | 0.28 mg/L | 0.0% |
| Vanadium, Dissolved | E 200.7 | 0.0096 mg/L | 0.0095 mg/L | 1.0% +/-RL |
| Vanadium, Total | E 200.7 | 0.0092 mg/L | 0.0096 mg/L | 4.3% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0096 mg/L | 0.0075 mg/L | 24.6% +/-RL |
| Antimony, Dissolved | E200.8 | 0.00070 mg/L | ND (0.0010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00088 mg/L | 0.00089 mg/L | 1.1% +/-RL |
| Arsenic, Total | E200.8 | 0.0011 mg/L | 0.0010 mg/L | 9.5% +/-RL |
| Lead, Dissolved | E200.8 | 0.000064 mg/L | ND (0.00050 mg/L) | DL |
| Selenium, Dissolved | E200.8 | 0.00055 mg/L | 0.00082 mg/L | 39.4% +/-RL |
| Selenium, Total | E200.8 | 0.0011 mg/L | 0.0014 mg/L | 24.0% +/-RL |
| TPH DRO | SW8015 | 0.030 mg/L | 0.016 mg/L | 60.9% +/-RL |
| TPH GRO | SW8015 | 0.014 mg/L | 0.016 mg/L | 13.3% +/-RL |
| Methylene Chloride | SW8260B | 52 µg/L | ND (3.0 µg/L) | DL |
| MTBE | SW8260B | 8.7 µg/L | 15 µg/L | 53.2% |
| 1,4-Dioxane | SW8270C | 0.76 µg/L | 0.80 µg/L | 5.1% +/-RL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for MTBE exceeded the data validation limit of 30% at 53.2%, which was evidence of poor precision. The MTBE results were qualified as J for samples BW-5B and DUP-6-9-22.

An RPD value could not be calculated for methylene chloride for the field duplicate pair BW-5B and DUP-6-9-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, methylene chloride was qualified as J and UJ for the parent and duplicate samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERP-D | High field duplicate RPD. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,2-Dichloroethane | SW8260B | OW-13 | 2206602-006a | 0.77 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | OW-29 | 2206602-005c | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dioxane | SW8270C | OW-29 | 2206602-005c | 0.46 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | DUP-6-9-22 | 2206602-008c | 0.80 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | BW-5B | 2206602-009c | 0.76 | 1.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-29 | 2206602-005c | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| Antimony, Dissolved | E200.8 | OW-29 | 2206602-005E | 0.00067 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | BW-5B | 2206602-009E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5C | 2206602-002E | 0.00055 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-52 | 2206602-004E | 0.00058 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-29 | 2206602-005E | 0.00046 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | OW-13 | 2206602-006E | 0.00069 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-9-22 | 2206602-008E | 0.00089 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5B | 2206602-009E | 0.00088 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-5C | 2206602-002D | 0.00076 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-52 | 2206602-004D | 0.00065 | 0.0010 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | OW-29 | 2206602-005c | ND | 20 | µg/L | UJ | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| Cobalt, Dissolved | E 200.7 | BW-5C | 2206602-002E | 0.0029 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | BW-5C | 2206602-002D | 0.0040 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cyanide, Total | E335.4 | OW-50 | 2206602-003F | 2.18 | 5.0 | µg/L | J | MDLRL |
| Diethylphthalate | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | OW-29 | 2206602-005c | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | OW-29 | 2206602-005c | 9.7 | 10 | µg/L | J- | LR-SUR, MDLRL |
| Di-n-octylphthalate | SW8270C | OW-29 | 2206602-005c | ND | 20 | µg/L | UJ | LR-SUR |
| Lead, Dissolved | E200.8 | BW-5B | 2206602-009E | 0.000064 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | BW-5C | 2206602-002D | 0.0014 | 0.0025 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | BW-5C | 2206602-002D | 0.00019 | 0.00020 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | DUP-6-9-22 | 2206602-008a | ND | 3.0 | µg/L | UJ | ERPD-FD |
| Methylene Chloride | SW8260B | OW-29 | 2206602-005a | 39 | 3.0 | µg/L | U | EBD |
| Methylene Chloride | SW8260B | BW-5B | 2206602-009a | 52 | 3.0 | µg/L | U | EBD, ERPFD-FD |
| MTBE | SW8260B | DUP-6-9-22 | 2206602-008a | 15 | 1.0 | µg/L | J | ERPD-FD |
| MTBE | SW8260B | BW-5B | 2206602-009a | 8.7 | 1.0 | µg/L | J | ERPD-FD |
| Nickel, Dissolved | E 200.7 | EB-6-9-22 | 2206602-001E | ND | 0.01 | mg/L | UJ | LR-LCS |
| Phenol | SW8270C | OW-29 | 2206602-005c | ND | 20 | µg/L | UJ | LR-SUR |
| Pyridine | SW8270C | OW-29 | 2206602-005c | ND | 60 | µg/L | UJ | LR-SUR |
| Selenium, Dissolved | E200.8 | BW-5C | 2206602-002E | 0.00040 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP-6-9-22 | 2206602-008E | 0.00082 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Selenium, Dissolved | E200.8 | BW-5B | 2206602-009E | 0.00055 | 0.0010 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | BW-5C | 2206602-002C | 0.078 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-6-9-22 | 2206602-001C | 0.017 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-50 | 2206602-003C | 0.046 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-13 | 2206602-006C | 0.039 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | DUP-6-9-22 | 2206602-008C | 0.016 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | BW-5B | 2206602-009C | 0.030 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | BW-5C | 2206602-002a | 0.023 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | OW-52 | 2206602-004a | 0.0094 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | DUP-6-9-22 | 2206602-008a | 0.016 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | BW-5B | 2206602-009a | 0.014 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5C | 2206602-002E | 0.0026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-13 | 2206602-006E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-9-22 | 2206602-008E | 0.0095 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5B | 2206602-009E | 0.0096 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-5C | 2206602-002D | 0.0089 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-9-22 | 2206602-008D | 0.0096 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-5B | 2206602-009D | 0.0092 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-50 | 2206602-003E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-52 | 2206602-004E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-6-9-22 | 2206602-001E | 0.0065 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | BW-5C | 2206602-002E | 0.0086 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-13 | 2206602-006E | 0.0076 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-9-22 | 2206602-008E | 0.0075 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | BW-5B | 2206602-009E | 0.0096 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | BW-5C | 2206602-002D | 0.0065 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-50 | 2206602-003D | 0.0043 | 0.010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Total | E 200.7 | OW-13 | 2206602-006D | 0.0045 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Aqueous |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/14/2022 |
| Date Validated: 09/20/2022 | Sample End Date: 06/14/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206781 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-14-22 | 2206781-001 |
| PW-3 | 2206781-002 |
| PW-4 | 2206781-003 |
| East LDU | 2206781-004 |
| West LDU | 2206781-005 |
| FB-6-9-22 | 2206781-006 |
| DUP-6-9-22 | 2206781-007 |
| Trip Blank | 2206781-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 450 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C: Samples PW-3 and East LDU had poor surrogate recoveries due to the emulsive nature of the sample.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times

Samples FB-6-14-22 and DUP-6-14-22 were logged into the laboratory system as FB-6-9-22 and DUP-6-9-22, respectively.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|----------------------|-----------------------------------|-----------------|
| 200.7 | East LDU, DUP-6-9-22 | Dissolved Chromium and Nickel | 5 |
| 200.7 | West LDU, DUP-6-9-22 | Total Chromium and Nickel | 5 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 200.7 | East LDU | Total Chromium and Nickel | 10 |
| 8015D | DUP-6-9-22 | TPH DRO and TPH MRO | 10 |
| 8260B | DUP-6-9-22 | Methylene Chloride | 10 |
| 200.8 | DUP-6-9-22 | Select Total Metals | 20 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.8°C , 3.1°C , and 4.8°C as noted on the CoC and the *Sample Log-in Check List*. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.7°C as noted on the CoC. The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.

TPH DRO was detected in the laboratory blank for Method 8015D batch 68185 at a concentration of 0.018 mg/L. TPH DRO was detected in associated samples EB-6-14-22 and PW-3 at concentrations less than the laboratory reporting limit and the results were qualified with U flags. Non-detections of this analyte in the associated samples and results greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|--------|-----------------------------|--------|----------------------|
| 200.7 | Total Metals | 68172 | West LDU, DUP-6-9-22 |
| 200.7 | Dissolved Metals | B88784 | EB-6-14-22 |
| 200.7 | Dissolved Silver | B88897 | Not Prepared |
| 200.8 | Total Metals | 68172 | Not Prepared |
| 200.8 | Dissolved Metals | B88918 | EB-6-14-22, PW-3 |
| 245.1 | Total and Dissolved Mercury | 68186 | Not Prepared |
| 504.1 | EDB | 68189 | Not Prepared |
| Method | Analytes | Batch | MS Sample Source |



VALIDATION CRITERIA CHECKLIST

| | | | |
|---------------------|-----------------|-----------|----------------|
| 4500CN E | Cyanide | WG1883737 | Not Associated |
| 8015D | TPH DRO and MRO | 68185 | Not Prepared |
| 8015D | TPH GRO | G88994 | Not Prepared |
| 8260B | VOCs | A88912 | Not Prepared |
| 8260B | VOCs | A88962 | Not Prepared |
| 8270C and 8270C SIM | SVOCs | 68202 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits, with the following exceptions.

The MS and MSD recoveries for total silver in Method 200.7 batch 68172 were outside the QC limits of 75-125% at 46.5% and 49.1%, respectively. Total silver was not detected in the associated samples and the results were qualified as UJ due to evidence of potential low bias.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|--------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Barium | 68172 | 137% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Nickel | B88784 | 64.9% | ----- | 70-130% | ----- | ----- |
| 245.1 | Total Mercury | 68186 | 145% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68185 | 92.4% | 90.2% | 31.7-75.4% | Acceptable | 20% |
| 8270C | 1,4-Dichlorobenzene | 68202 | Acceptable | Acceptable | 15-89.8% | 47.0% | 39.6% |
| 8270C | Phenol | 68202 | Acceptable | Acceptable | 17-61.1% | 52.4% | 42.5% |
| 8270C | Pyrene | 68202 | Acceptable | Acceptable | 61-123% | 28.9% | 11.8% |

Total barium and TPH DRO were detected in the associated samples and these results were qualified as J+ due to evidence of potential high bias. The non-detections of total barium in the associated sample EB-6-14-22 and TPH DRO in sample PW-4 did not require qualification. Total mercury was not detected in the associated samples in Method 245.1 batch 68186 and the results did not require qualification based on the evidence of potential high bias.

Dissolved nickel was qualified as J- for detections and UJ for non-detections in the associated samples due to potential low bias.

The analytes with LCS/LCSD RPD values that exceeded the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|------------|--------------------|------------|
| 8270C | 2-Fluorophenol | PW-3 | 24.0% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | PW-3 | 18.0% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | PW-3 | 29.8% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | PW-3 | 30.2% | 38.1-99.9% |
| 8015D | BFB | East LDU | 213% | 70-130% |
| 8270C | 2-Fluorophenol | East LDU | 1.79% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | East LDU | 10.9% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | East LDU | 10.7% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | East LDU | 33.5% | 36.9-103% |
| 8270C SIM | 4-Terphenyl-d ₁₄ | East LDU | 56.9% | 72.3-147% |
| 8270C | Phenol-d ₅ | West LDU | 0% | 28.5-64.7% |
| 8015D | BFB | DUP-6-9-22 | 230% | 70-130% |
| 8270C SIM | 4-Terphenyl-d ₁₄ | DUP-6-9-22 | 65.7% | 72.3-147% |

Since Method 8270C and Method 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples West LDU and DUP-6-9-22 and qualification of sample data was not required.

The associated target analytes in the samples with surrogate recoveries that were less than lower laboratory QC limits were not detected, and the results were qualified as UJ due to evidence of potential low bias.

TPH GRO was detected in samples East LDU and DUP-6-9-22 and these results were qualified as J+ due to evidence of potential high bias.

The TPH DRO and TPH MRO results for sample DUP-6-9-22 were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilution of 10 times resulted in a surrogate concentration below routinely calibrated levels and those results were deemed unreliable and possibly inaccurate

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample FB-6-9-22, and one equipment blank sample, EB 6-14-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| Trip Blank | 8260B | Chloromethane | 0.76 µg/L |
| Trip Blank | 8260B | Methylene Chloride | 0.52 µg/L |
| FB-6-9-22 | 8260B | Acetone | 3.5 µg/L |
| FB-6-9-22 | 8260B | Methylene Chloride | 0.72 µg/L |
| FB-6-9-22 | 8260B | Toluene | 0.32 µg/L |
| EB-6-14-22 | 8015D | TPH DRO | 0.035 mg/L |
| EB-6-14-22 | 8260B | Chloromethane | 0.67 µg/L |
| EB-6-14-22 | 8260B | Methylene Chloride | 0.92 µg/L |
| EB-6-14-22 | 200.7 | Dissolved Zinc | 0.0058 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of toluene and dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results in batch 68185 were previously qualified due to laboratory blank contamination; therefore, additional qualification based on the equipment blank detection was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-9-22 was collected as a field duplicate of sample East LDU.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

An RPD value could not be calculated for total zinc for the field duplicate pair LDU-East and DUP-6-9-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, total zinc was qualified as J and UJ for the duplicate and parent samples, respectively.

The RPD value for methylene chloride greatly exceeded the data validation limit of 30% at 156.3%. The methylene chloride results were qualified as J for the parent and duplicate samples, LDU-East and DUP-6-9-22, as well as the remaining associated samples based on evidence of extremely poor precision (RPD > 100%).



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: A laboratory duplicate was prepared for the analysis of total cyanide in batch WG1883737 from a sample not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| DUP-6-9-22 | Arsenic | ND | 0.00081 |
| PW-4 | Selenium | ND | 0.00070 |
| PW-3 | Silver | ND | 0.0058 |
| PW-4 | Silver | ND | 0.0050 |
| PW-3 | Vanadium | ND | 0.0019 |
| EB-6-14-22 | Zinc | ND | 0.0058 |
| PW-4 | Zinc | ND | 0.0096 |
| East LDU | Zinc | ND | 0.12 |
| West LDU | Zinc | ND | 0.064 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: East LDU
Field Duplicate Sample ID: DUP-6-9-22 | | | | |
|---|----------------|------------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.053 mg/L | 0.052 mg/L | 1.9% |
| Barium, Total | E 200.7 | 0.14 mg/L | 0.14 mg/L | 0.0% |
| Beryllium, Dissolved | E 200.7 | 0.0045 mg/L | 0.0044 mg/L | 2.2% |
| Beryllium, Total | E 200.7 | 0.0045 mg/L | 0.0046 mg/L | 2.2% |
| Chromium, Dissolved | E 200.7 | 2.9 mg/L | 2.8 mg/L | 3.5% |
| Chromium, Total | E 200.7 | 5.3 mg/L | 4.7 mg/L | 12.0% |
| Cobalt, Dissolved | E 200.7 | 0.014 mg/L | 0.014 mg/L | 0.0% |
| Cobalt, Total | E 200.7 | 0.021 mg/L | 0.024 mg/L | 13.3% |
| Nickel, Dissolved | E 200.7 | 3.3 mg/L | 3.2 mg/L | 3.1% |
| Nickel, Total | E 200.7 | 3.3 mg/L | 3.4 mg/L | 3.0% |
| Vanadium, Dissolved | E 200.7 | 0.018 mg/L | 0.018 mg/L | 0.0% +/-RL |
| Vanadium, Total | E 200.7 | 0.12 mg/L | 0.13 mg/L | 8.0% |
| Zinc, Dissolved | E 200.7 | 0.12 mg/L | 0.12 mg/L | 0.0% |
| Zinc, Total | E 200.7 | ND (0.010 mg/L) | 0.16 mg/L | DL |
| Arsenic, Dissolved | E200.8 | 0.00098 mg/L | 0.00081 mg/L | 19.0% +/-RL |
| Arsenic, Total | E200.8 | 0.0013 mg/L | ND (0.020 mg/L) | DL |
| Lead, Total | E200.8 | 0.00048 mg/L | ND (0.010 mg/L) | DL |
| TPH GRO | SW8015 | 0.41 mg/L | 0.52 mg/L | 23.7% |
| TPH DRO | SW8015 | 3.6 mg/L | 3.5 mg/L | 2.8% |
| TPH ORO | SW8015 | 0.061 mg/L | ND (0.80 mg/L) | DL |
| 1,2,4-Trimethylbenzene | SW8260B | 10 µg/L | 9.6 µg/L | 4.1% |
| 1,3,5-Trimethylbenzene | SW8260B | 8.4 µg/L | 8.2 µg/L | 2.4% |
| Benzene | SW8260B | 25 µg/L | 21 µg/L | 17.4% |
| Chloroform | SW8260B | 0.24 µg/L | ND (1.0 µg/L) | DL |
| Chloromethane | SW8260B | 0.94 µg/L | ND (3.0 µg/L) | DL |
| Ethylbenzene | SW8260B | 20 µg/L | 19 µg/L | 5.1% |
| Isopropylbenzene | SW8260B | 4.3 µg/L | 4.2 µg/L | 2.4% |
| Methylene Chloride | SW8260B | 27 µg/L | 220 µg/L | 156.3% |
| MTBE | SW8260B | 1.5 µg/L | 1.5 µg/L | 0.0% +/-RL |
| n-Butylbenzene | SW8260B | 0.87 µg/L | 0.81 µg/L | 7.1% +/-RL |
| n-Propylbenzene | SW8260B | 4.5 µg/L | 4.3 µg/L | 4.5% |
| p-Isopropyltoluene | SW8260B | 1.3 µg/L | 1.3 µg/L | 0.0% +/-RL |
| sec-Butylbenzene | SW8260B | 2.2 µg/L | 2.0 µg/L | 9.5% |
| Toluene | SW8260B | 1.7 µg/L | 1.7 µg/L | 0.0% +/-RL |
| Vinyl Chloride | SW8260B | 0.52 µg/L | ND (1.0 µg/L) | DL |
| Xylenes, Total | SW8260B | 14 µg/L | 14 µg/L | 0.0% |
| 1,4-Dioxane | SW8270C | 0.40 µg/L | 1.4 µg/L | 111.1% +/-RL |
| 1-Methylnaphthalene | SW8270C | 0.48 µg/L | 0.34 µg/L | 34.1% +/-RL |



| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
|--------------|---------|-------------------|------------------|-----------------------------------|
| Acenaphthene | SW8270C | 0.64 µg/L | 0.68 µg/L | 6.1% |
| Anthracene | SW8270C | 0.46 µg/L | 0.52 µg/L | 12.2% +/-RL |
| Fluoranthene | SW8270C | 0.68 µg/L | 0.76 µg/L | 11.1% |
| Fluorene | SW8270C | 1.2 µg/L | 1.3 µg/L | 8.0% |
| Phenanthrene | SW8270C | 2.2 µg/L | 2.5 µg/L | 12.8% |
| Pyrene | SW8270C | ND (1.0 µg/L) | 0.34 µg/L | DL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

An RPD value could not be calculated for total zinc for the field duplicate pair LDU-East and DUP-6-9-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, total zinc was qualified as J and UJ for the duplicate and parent samples, respectively.

The RPD value for methylene chloride greatly exceeded the data validation limit of 30% at 156.3%. The methylene chloride results were qualified as J for the parent and duplicate samples, LDU-East and DUP-6-9-22, as well as the remaining associated samples based on evidence of extremely poor precision (RPD > 100%).



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| MBD | Method blank detection |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| FBD | Field blank detection |
| EBD | Equipment blank detection |
| TBD | Trip blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|------------------|
| 1,3,5-Trimethylbenzene | SW8260B | West LDU | 2206781-005a | 0.18 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | EB-6-14-22 | 2206781-001c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | PW-4 | 2206781-003c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | East LDU | 2206781-004c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | West LDU | 2206781-005c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | DUP-6-9-22 | 2206781-007c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | PW-3 | 2206781-002c | ND | 5.0 | µg/L | UJ | ERPD-LCS, LR-SUR |
| 1,4-Dioxane | SW8270C | East LDU | 2206781-004c | 0.40 | 1.0 | µg/L | J | MDLRL |
| 2,4-Dimethylphenol | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | East LDU | 2206781-004c | ND | 10 | µg/L | UJ | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2,4-Dinitrophenol | SW8270C | PW-3 | 2206781-002c | ND | 20 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | East LDU | 2206781-004c | ND | 20 | µg/L | UJ | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | East LDU | 2206781-004c | ND | 10 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | East LDU | 2206781-004c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | East LDU | 2206781-004c | ND | 10 | µg/L | UJ | LR-SUR |
| Acetone | SW8260B | West LDU | 2206781-005a | 8.5 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | FB-6-9-22 | 2206781-006a | 3.5 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | East LDU | 2206781-004E | 0.00098 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-9-22 | 2206781-007E | 0.00081 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | PW-4 | 2206781-003D | 0.0029 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | East LDU | 2206781-004D | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | West LDU | 2206781-005D | 0.00097 | 0.0050 | mg/L | J | MDLRL |
| Barium, Total | E 200.7 | PW-3 | 2206781-002D | 0.012 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | PW-4 | 2206781-003D | 0.014 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | East LDU | 2206781-004D | 0.14 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | West LDU | 2206781-005D | 0.067 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | DUP-6-9-22 | 2206781-007D | 0.14 | 0.0030 | mg/L | J+ | HR-LCS |
| Benzene | SW8260B | West LDU | 2206781-005a | 0.43 | 1.0 | µg/L | J | MDLRL |
| Benzoic Acid | SW8270C | PW-3 | 2206781-002c | ND | 20 | µg/L | UJ | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| Chloroform | SW8260B | East LDU | 2206781-004a | 0.24 | 1.0 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | Trip Blank | 2206781-008a | 0.76 | 3.0 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | EB-6-14-22 | 2206781-001a | 0.67 | 3.0 | µg/L | U | MDLRL, TBD |
| Chloromethane | SW8260B | East LDU | 2206781-004a | 0.94 | 3.0 | µg/L | U | MDLRL, TBD |
| Cobalt, Dissolved | E 200.7 | West LDU | 2206781-005E | 0.0039 | 0.0060 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|---------------------|
| Cobalt, Total | E 200.7 | PW-3 | 2206781-002D | 0.0036 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | PW-4 | 2206781-003D | 0.0036 | 0.0060 | mg/L | J | MDLRL |
| Diethylphthalate | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | PW-3 | 2206781-002c | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-octylphthalate | SW8270C | PW-3 | 2206781-002c | ND | 20 | µg/L | UJ | LR-SUR |
| Lead, Dissolved | E200.8 | West LDU | 2206781-005E | 0.00043 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | PW-3 | 2206781-002D | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | East LDU | 2206781-004D | 0.00048 | 0.00250 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | West LDU | 2206781-005D | 0.0017 | 0.00250 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | East LDU | 2206781-004a | 27 | 3.0 | µg/L | J | ERPD-FD |
| Methylene Chloride | SW8260B | West LDU | 2206781-005a | 15 | 3.0 | µg/L | J | ERPD-FD |
| Methylene Chloride | SW8260B | DUP-6-9-22 | 2206781-007a | 220 | 30 | µg/L | J | ERPD-FD |
| Methylene Chloride | SW8260B | Trip Blank | 2206781-008a | 0.52 | 3.0 | µg/L | J | ERPD-FD, MDLRL |
| Methylene Chloride | SW8260B | EB-6-14-22 | 2206781-001a | 0.92 | 3.0 | µg/L | U | ERPD-FD, MDLRL, TBD |
| Methylene Chloride | SW8260B | PW-3 | 2206781-002a | 2.1 | 3.0 | µg/L | U | ERPD-FD, MDLRL, TBD |
| Methylene Chloride | SW8260B | PW-4 | 2206781-003a | 1.6 | 3.0 | µg/L | U | ERPD-FD, MDLRL, TBD |
| Methylene Chloride | SW8260B | FB-6-9-22 | 2206781-006a | 0.72 | 3.0 | µg/L | U | ERPD-FD, MDLRL, TBD |
| n-Butylbenzene | SW8260B | East LDU | 2206781-004a | 0.87 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP-6-9-22 | 2206781-007a | 0.81 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | East LDU | 2206781-004E | 3.3 | 0.050 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | West LDU | 2206781-005E | 0.96 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | DUP-6-9-22 | 2206781-007E | 3.2 | 0.050 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | EB-6-14-22 | 2206781-001E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | PW-3 | 2206781-002E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | PW-4 | 2206781-003E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Phenol | SW8270C | EB-6-14-22 | 2206781-001c | ND | 20 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|--------------------|
| Phenol | SW8270C | PW-4 | 2206781-003c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | West LDU | 2206781-005c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | DUP-6-9-22 | 2206781-007c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | PW-3 | 2206781-002c | ND | 20 | µg/L | UJ | ERPD-LCS, LR-SUR |
| Phenol | SW8270C | East LDU | 2206781-004c | ND | 20 | µg/L | UJ | ERPD-LCS, LR-SUR |
| Pyrene | SW8270C | EB-6-14-22 | 2206781-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | PW-3 | 2206781-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | PW-4 | 2206781-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | East LDU | 2206781-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | West LDU | 2206781-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-6-9-22 | 2206781-007c | 0.34 | 1.0 | µg/L | J | ERPD-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | PW-4 | 2206781-003E | 0.0007 | 0.0010 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | EB-6-14-22 | 2206781-001D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Total | E 200.7 | PW-3 | 2206781-002D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Total | E 200.7 | PW-4 | 2206781-003D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Total | E 200.7 | East LDU | 2206781-004D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Total | E 200.7 | West LDU | 2206781-005D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Total | E 200.7 | DUP-6-9-22 | 2206781-007D | ND | 0.0050 | mg/L | UJ | LR-MS |
| Toluene | SW8260B | East LDU | 2206781-004a | 1.7 | 1.0 | µg/L | JB | FBD |
| Toluene | SW8260B | DUP-6-9-22 | 2206781-007a | 1.7 | 1.0 | µg/L | JB | FBD |
| Toluene | SW8260B | FB-6-9-22 | 2206781-006a | 0.32 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | East LDU | 2206781-004C | 3.6 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | West LDU | 2206781-005C | 2.3 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | DUP-6-9-22 | 2206781-007C | 3.5 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | EB-6-14-22 | 2206781-001C | 0.035 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | PW-3 | 2206781-002C | 0.036 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | East LDU | 2206781-004a | 0.41 | 0.050 | mg/L | J+ | HR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | DUP-6-9-22 | 2206781-007a | 0.52 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | West LDU | 2206781-005a | 0.050 | 0.050 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | East LDU | 2206781-004C | 0.061 | 0.080 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | PW-3 | 2206781-002E | 0.0019 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | East LDU | 2206781-004E | 0.018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-9-22 | 2206781-007E | 0.018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | West LDU | 2206781-005D | 0.025 | 0.050 | mg/L | J | MDLRL |
| Vinyl Chloride | SW8260B | East LDU | 2206781-004a | 0.52 | 1.0 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | PW-3 | 2206781-002E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | PW-4 | 2206781-003E | 0.0096 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-14-22 | 2206781-001E | 0.0058 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-9-22 | 2206781-007D | 0.16 | 0.010 | mg/L | J | ERPD-FD |
| Zinc, Total | E 200.7 | East LDU | 2206781-004D | ND | 0.010 | mg/L | UJ | ERPD-FD |



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Aqueous |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/15/2022 |
| Date Validated: 09/22/2022 | Sample End Date: 06/15/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206866 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-15-22 | 2206866-001 |
| OW-1 | 2206866-002 |
| OW-54 | 2206866-003 |
| OW-66 | 2206866-004 |
| OW-55 | 2206866-005 |
| OW-56 | 2206866-006 |
| OW-59 | 2206866-007 |
| DUP-6-15-22 | 2206866-008 |
| FB-6-15-22 | 2206866-009 |
| Trip Blank | 2206866-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C: Sample OW-59 had poor surrogate recoveries due to the emulsive nature of the sample.

Naphthalene, 1-methylnaphthalene and 2-methylnaphthalene may be reported by either EPA Method 8270 or EPA Method 8270 SIM, depending which method needs the least dilution. In this report naphthalene, 1-methylnaphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM for samples OW-66 and OW-55.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|------------------|-----------------------------------|-----------------|
| 200.7 | OW-66 | Total and Dissolved Barium | 5 |
| 200.7 | OW-59 | Total Metals | 5 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 8015D | OW-54 | TPH GRO | 5 |
| 8260B | OW-54 | VOCs | 5 |
| 200.8 | OW-59 | Total Metals | 10 |
| 8015D | OW-66, OW-55 | TPH DRO and TPH MRO | 10 |
| 8260B | EB-6-15-22 | Methylene Chloride | 10 |
| 8015D | OW-66, OW-55 | TPH GRO | 50 |
| 8260B | OW-54 | MTBE | 50 |
| 8260B | OW-66, OW-55 | Select VOCs | 50 |
| 8260B | OW-66 | Benzene, Toluene | 500 |
| 8260B | OW-55 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 1.5°C and 5.1°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature below the recommended range at 1.8°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 68185 at a concentration of 0.018 mg/L. The samples EB-6-15-22 and OW-1 TPH DRO results detected below the laboratory reporting limit were qualified with U flags. Non-detections of this analyte in the associated samples and results greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|---------------------|-----------------------------|-----------|----------------------------|
| 200.7 | Total Metals | 68172 | Not Prepared |
| 200.7 | Dissolved Metals | B88897 | EB-6-15-22 |
| 200.8 | Total Metals | 68172 | DUP-6-15-22 |
| 200.8 | Dissolved Metals | B88918 | Not Prepared |
| 200.8 | Dissolved Metals | D88918 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68219 | Not Prepared |
| 504.1 | EDB | 68190 | Trip Blank |
| 4500CN E | Cyanide | WG1884563 | Not Associated, EB-6-15-22 |
| 4500CN E | Cyanide | WG1885513 | Not Associated |
| 8015D | TPH DRO and MRO | 68185 | Not Prepared |
| 8015D | TPH GRO | G88994 | Not Prepared |
| 8260B | VOCs | R89027 | EB-6-15-22 |
| 8260B | VOCs | W89041 | Not Prepared |
| 8270C and 8270C SIM | SVOCs | 68202 | Not Prepared |
| 8270C and 8270C SIM | SVOCs | 68218 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits, with the following exceptions.

The MSD recovery for total selenium in Method 200.8 batch 68172 was outside the QC limits of 75-125% at 127%. Detections in the associated samples were qualified as J+ due to potential high bias. Non-detections in the associated samples did not require qualification due to this non-conformance.

The MS/MSD RPD value for EDB in Method 504.1 batch 68190 was outside the QC limit of 20% at 22.9%. EDB was not detected in the associated samples. These EDB results were qualified as UJ due to evidence of poor precision.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Barium | 68172 | 137% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68185 | 92.4% | 90.2% | 31.7-75.4% | Acceptable | 20% |
| 8270C | 1,4-Dichlorobenzene | 68202 | Acceptable | Acceptable | 15-89.8% | 47.0% | 39.6% |
| 8270C | Phenol | 68202 | Acceptable | Acceptable | 17-61.1% | 52.4% | 42.5% |
| 8270C | Pyrene | 68202 | Acceptable | Acceptable | 61-123% | 28.9% | 11.8% |
| 8270C SIM | 1-Methylnaphthalene | 68218 | 82.0% | Acceptable | 22.2-80.3% | Acceptable | 25% |
| 8270C SIM | 2-Methylnaphthalene | 68218 | 85.0% | Acceptable | 20.6-80.1% | Acceptable | 25% |
| 8270C SIM | Fluorene | 68218 | 93.0% | 88.0% | 33.3-86% | Acceptable | 26.4% |
| 8270C SIM | Phenanthrene | 68218 | 94.0% | Acceptable | 38.2-93.9% | Acceptable | 27.9% |
| 8270C SIM | Anthracene | 68218 | 127% | 102% | 41.1-95.6% | Acceptable | 25.6% |
| 8270C SIM | Fluoranthene | 68218 | 158% | Acceptable | 52.9-123% | Acceptable | 22.8% |
| 8270C SIM | Benzo(a)anthracene | 68218 | 170% | Acceptable | 51-147% | 33.1% | 24.1% |
| 8270C SIM | Benzo(b)fluoranthene | 68218 | Acceptable | Acceptable | 44.4-136% | 28.6% | 24.5% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | 68218 | Acceptable | 166% | 31.4-165% | 59.4% | 21.1% |

Analytes with LCS and/or LCSD recoveries greater than the laboratory or data validation QC limits were detected in the associated samples, and the results were qualified as J+ to indicate estimated concentrations that may be biased high. Non-detections of these analytes in the associated samples did not require qualification.

The analytes with LCS/LCSD RPD values that were above the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|--------|--------------------|------------|
| 8270C SIM | 4-Terphenyl-d ₁₄ | OW-54 | 70.2% | 72.3-147% |
| 8270C | 2-Fluorophenol | OW-66 | 0% | 29.4-87.7% |
| 8270C SIM | 4-Terphenyl-d ₁₄ | OW-66 | 71.3% | 72.3-147% |
| 8270C SIM | 4-Terphenyl-d ₁₄ | OW-55 | 71.4% | 72.3-147% |
| 8015D | BFB | OW-56 | 1,240% | 70-130% |
| 8270C SIM | 4-Terphenyl-d ₁₄ | OW-56 | 71.9% | 72.3-147% |
| 8015D | BFB | OW-59 | 6,400% | 70-130% |
| 8270C | 2-Fluorophenol | OW-59 | 27.8% | 29.4-87.7% |
| 8270C | 2,4,6-Tribromophenol | OW-59 | 12.1% | 18.6-129% |

Since Method 8270C and Method 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the samples OW-54, OW-66, OW-55, and OW-56, and qualification of sample data was not required.



VALIDATION CRITERIA CHECKLIST

The associated target analytes in sample OW-59 with surrogate recoveries that were less than the lower laboratory QC limits were not detected in sample OW-59, and these results were qualified as UJ due to evidence of potential low bias.

TPH GRO was detected in samples OW-56 and OW-59, and these TPH GRO results were qualified as J+ due to evidence of potential high bias.

The TPH DRO and TPH MRO results for samples OW-66 and OW-55 were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilutions of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample FB-6-15-22, and one equipment blank sample, EB 6-15-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|--------------------|---------------|
| FB-6-15-22 | 8260B | Acetone | 4.2 µg/L |
| EB-6-15-22 | 8260B | Acetone | 3.4 µg/L |
| EB-6-15-22 | 8260B | Methylene Chloride | 8.5 µg/L |
| EB-6-15-22 | 8015 | TPH DRO | 0.019 mg/L |
| EB-6-15-22 | 200.7 | Dissolved Zinc | 0.0054 mg/L |

Detections of acetone and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results in batch 68185 were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-15-22 was collected as a field duplicate of sample OW-01.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for dissolved zinc exceeded the data validation limit of 30% at 82.4%, which was evidence of poor precision. The dissolved zinc results were qualified as J for samples OW-1 and DUP-6-15-22.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1884563 | Not Associated |
| 4500CN E | Cyanide | WG1885513 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-56 | Selenium | ND | 0.00068 |
| OW-59 | Selenium | ND | 0.0018 |
| OW-54 | Silver | ND | 0.0013 |
| OW-55 | Silver | ND | 0.0018 |
| OW-56 | Silver | ND | 0.0017 |
| OW-59 | Silver | ND | 0.0050 |
| OW-59 | Vanadium | ND | 0.0052 |
| EB-6-15-22 | Zinc | ND | 0.0054 |
| OW-1 | Zinc | ND | 0.048 |
| OW-66 | Zinc | 0.013 | 0.016 |
| OW-55 | Zinc | 0.022 | 0.048 |
| OW-56 | Zinc | 0.0066 | 0.011 |
| OW-59 | Zinc | ND | 0.0062 |
| DUP-6-15-22 | Zinc | ND | 0.020 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-1
Field Duplicate Sample ID: DUP-6-15-22 | | | | |
|--|----------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.037 mg/L | 0.037 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.044 mg/L | 0.045 mg/L | 2.2% |
| Chromium, Total | E 200.7 | 0.0045 mg/L | 0.0044 mg/L | 2.2% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.039 mg/L | 0.038 mg/L | 2.6% +/-RL |
| Vanadium, Total | E 200.7 | 0.043 mg/L | 0.045 mg/L | 4.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.048 mg/L | 0.020 mg/L | 82.4% |
| Arsenic, Dissolved | E200.8 | 0.00070 mg/L | 0.00066 mg/L | 5.9% +/-RL |
| Arsenic, Total | E200.8 | 0.00078 mg/L | 0.00074 mg/L | 5.3% +/-RL |
| Lead, Total | E200.8 | 0.00025 mg/L | 0.00024 mg/L | 4.1% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0021 mg/L | 0.0021 mg/L | 0.0% |
| Selenium, Total | E200.8 | 0.0026 mg/L | 0.0023 mg/L | 12.2% |
| TPH DRO | SW8015 | 0.027 mg/L | ND (0.064 mg/L) | DL |
| MTBE | SW8260B | 1.9 µg/L | 2.2 µg/L | 14.6% |
| 1,4-Dioxane | SW8270C | 0.26 µg/L | 0.22 µg/L | 16.7% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for dissolved zinc exceeded the data validation limit of 30% at 82.4%, which was evidence of poor precision. The dissolved zinc results were qualified as J for samples OW-1 and DUP-6-15-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| ERPD-MS | The MS/MSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-MS | The MS and/or MSD percent recovery was greater than the upper acceptable limit indicating possible matrix interference. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | OW-56 | 2206866-006a | 0.35 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-54 | 2206866-003a | 2.4 | 5.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-56 | 2206866-006a | 0.23 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-59 | 2206866-007a | 0.19 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dibromoethane | E504.1 | EB-6-15-22 | 2206866-001B | ND | 0.0093 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-1 | 2206866-002B | ND | 0.0094 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-54 | 2206866-003B | ND | 0.0093 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-66 | 2206866-004B | ND | 0.0094 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-55 | 2206866-005B | ND | 0.0094 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-56 | 2206866-006B | ND | 0.0094 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | OW-59 | 2206866-007B | ND | 0.0094 | µg/L | UJ | ERPD-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,2-Dibromoethane | E504.1 | DUP-6-15-22 | 2206866-008B | ND | 0.0095 | µg/L | UJ | ERPD-MS |
| 1,2-Dibromoethane | E504.1 | Trip Blank | 2206866-010B | ND | 0.0093 | µg/L | UJ | ERPD-MS |
| 1,4-Dichlorobenzene | SW8270C | EB-6-15-22 | 2206866-001c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-1 | 2206866-002c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-54 | 2206866-003c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-66 | 2206866-004c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-55 | 2206866-005c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dichlorobenzene | SW8270C | OW-56 | 2206866-006c | ND | 5.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | OW-1 | 2206866-002c | 0.26 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | DUP-6-15-22 | 2206866-008c | 0.22 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-54 | 2206866-003c | 0.24 | 0.30 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-59 | 2206866-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-59 | 2206866-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-59 | 2206866-007c | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-59 | 2206866-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-59 | 2206866-007c | ND | 10 | µg/L | UJ | LR-SUR |
| Acenaphthene | SW8270C | OW-66 | 2206866-004C | 0.28 | 0.3 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-6-15-22 | 2206866-001a | 3.4 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | OW-55 | 2206866-005a | 180 | 500 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | OW-56 | 2206866-006a | 5.3 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | OW-59 | 2206866-007a | 2.9 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | FB-6-15-22 | 2206866-009a | 4.2 | 10 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-1 | 2206866-002E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-59 | 2206866-007E | 0.0043 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-6-15-22 | 2206866-008E | 0.00066 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-1 | 2206866-002D | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-56 | 2206866-006D | 0.0042 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Arsenic, Total | E200.8 | OW-59 | 2206866-007D | 0.0059 | 0.010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-15-22 | 2206866-008D | 0.00074 | 0.0010 | mg/L | J | MDLRL |
| Barium, Total | E 200.7 | OW-1 | 2206866-002D | 0.044 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-54 | 2206866-003D | 0.47 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-66 | 2206866-004D | 2.0 | 0.015 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-55 | 2206866-005D | 0.74 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-56 | 2206866-006D | 0.46 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-59 | 2206866-007D | 0.092 | 0.015 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | DUP-6-15-22 | 2206866-008D | 0.045 | 0.0030 | mg/L | J+ | HR-LCS |
| Benzo(a)anthracene | SW8270C | OW-59 | 2206866-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | DUP-6-15-22 | 2206866-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-59 | 2206866-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | DUP-6-15-22 | 2206866-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzoic Acid | SW8270C | OW-59 | 2206866-007c | ND | 20 | µg/L | UJ | LR-SUR |
| Chloromethane | SW8260B | OW-56 | 2206866-006a | 0.93 | 3.0 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-1 | 2206866-002D | 0.0045 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-54 | 2206866-003D | 0.0059 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-6-15-22 | 2206866-008D | 0.0044 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-66 | 2206866-004E | 0.0033 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-56 | 2206866-006D | 0.0047 | 0.0060 | mg/L | J | MDLRL |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-59 | 2206866-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-6-15-22 | 2206866-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | OW-66 | 2206866-004a | 17 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-55 | 2206866-005a | 26 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-56 | 2206866-006a | 0.76 | 1.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-59 | 2206866-007a | 0.38 | 1.0 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-66 | 2206866-004E | 0.00032 | 0.00050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Lead, Dissolved | E200.8 | OW-55 | 2206866-005E | 0.000059 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-56 | 2206866-006E | 0.00025 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-1 | 2206866-002D | 0.00025 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-59 | 2206866-007D | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-6-15-22 | 2206866-008D | 0.00024 | 0.00050 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | EB-6-15-22 | 2206866-001a | 8.5 | 30 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-54 | 2206866-003c | 0.20 | 0.30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-66 | 2206866-004a | 16 | 150 | µg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-59 | 2206866-007D | 0.037 | 0.050 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | OW-55 | 2206866-005a | 50 | 50 | µg/L | J | MDLRL |
| Phenol | SW8270C | OW-59 | 2206866-007c | ND | 20 | µg/L | UJ | LR-SUR |
| Phenol | SW8270C | OW-66 | 2206866-004c | 32 | 20 | µg/L | J | ERPD-LCS |
| Phenol | SW8270C | OW-55 | 2206866-005c | 24 | 20 | µg/L | J | ERPD-LCS |
| Phenol | SW8270C | EB-6-15-22 | 2206866-001c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-1 | 2206866-002c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-54 | 2206866-003c | ND | 20 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | OW-56 | 2206866-006c | ND | 20 | µg/L | UJ | ERPD-LCS |
| p-Isopropyltoluene | SW8260B | OW-66 | 2206866-004a | 12 | 50 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-6-15-22 | 2206866-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-1 | 2206866-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-54 | 2206866-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-66 | 2206866-004C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-55 | 2206866-005C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-56 | 2206866-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| sec-Butylbenzene | SW8260B | OW-56 | 2206866-006a | 0.16 | 1.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-66 | 2206866-004E | 0.00038 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-56 | 2206866-006E | 0.00068 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|--------------------|
| Selenium, Dissolved | E200.8 | OW-59 | 2206866-007E | 0.0018 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-1 | 2206866-002D | 0.0026 | 0.0010 | mg/L | J+ | HR-MS |
| Selenium, Total | E200.8 | DUP-6-15-22 | 2206866-008D | 0.0023 | 0.0010 | mg/L | J+ | HR-MS |
| Selenium, Total | E200.8 | OW-66 | 2206866-004D | 0.0020 | 0.0050 | mg/L | J+ | HR-MS, MDLRL |
| Silver, Dissolved | E 200.7 | OW-54 | 2206866-003E | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-55 | 2206866-005E | 0.0018 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-56 | 2206866-006E | 0.0017 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-59 | 2206866-007E | 0.0050 | 0.0050 | mg/L | J | MDLRL |
| Styrene | SW8260B | OW-55 | 2206866-005a | 9.3 | 50 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-54 | 2206866-003C | 2.2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-66 | 2206866-004C | 5.1 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-55 | 2206866-005C | 3.9 | 0.64 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-56 | 2206866-006C | 1.1 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-59 | 2206866-007C | 0.58 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | EB-6-15-22 | 2206866-001C | 0.019 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-1 | 2206866-002C | 0.027 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | OW-56 | 2206866-006a | 0.45 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-59 | 2206866-007a | 0.35 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | OW-56 | 2206866-006C | 0.064 | 0.080 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-1 | 2206866-002E | 0.039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-66 | 2206866-004E | 0.0022 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-55 | 2206866-005E | 0.0032 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-56 | 2206866-006E | 0.0018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-59 | 2206866-007E | 0.0052 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-15-22 | 2206866-008E | 0.038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-1 | 2206866-002D | 0.043 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-54 | 2206866-003D | 0.016 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Total | E 200.7 | OW-66 | 2206866-004D | 0.026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-55 | 2206866-005D | 0.020 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-56 | 2206866-006D | 0.0063 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-6-15-22 | 2206866-008D | 0.045 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-54 | 2206866-003a | 2.2 | 7.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-54 | 2206866-003E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-66 | 2206866-004E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-55 | 2206866-005E | 0.048 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-56 | 2206866-006E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-1 | 2206866-002E | 0.048 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | DUP-6-15-22 | 2206866-008E | 0.020 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | OW-59 | 2206866-007E | 0.0062 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-15-22 | 2206866-001E | 0.0054 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-56 | 2206866-006D | 0.0066 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q2 GW Sampling | Sample Matrix: Aqueous |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/15/2022 |
| Date Validated: 09/22/2022 | Sample End Date: 06/16/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOCs) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2206938 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace National of Mount Juliet, Tennessee, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-16-22 | 2206938-001 |
| OW-60 | 2206938-002 |
| OW-68 | 2206938-003 |
| OW-67 | 2206938-004 |
| MKTF-43 | 2206938-005 |
| MKTF-41 | 2206938-006 |
| FB-6-16-22 | 2206938-007 |
| DUP-6-16-22 | 2206938-008 |
| Trip Blank | 2206938-009 |
| MKTF-32 | 2206938-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Twenty-eight points were rejected. The data completeness measure for this data package is calculated to be 95.56% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C: Analytical Notes Regarding sample MKTF-32. The 8270 LCSD had low recoveries for the phenol spikes. The LCS had acceptable recoveries for all compounds.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

E – Estimated Value. **The target analyte 1,4-dioxane was flagged by the laboratory with the E flag for sample MKTF-32. This result was assigned a J qualifier due to this calibration range non-conformance.**

J – Analyte detected below quantitation limits.

R – RPD value outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|-----------------------------|-----------------------------------|------------------------|
| 8260B | MKTF-32 | VOCs | 2 |
| 200.7 | Multiple Samples | Select Total Metals | 5 |
| 200.8 | OW-60, OW-67 | Select Dissolved Metals | 5 |
| 200.8 | MKTF-41 | Total Arsenic and Selenium | 5 |
| 200.8 | MKTF-43, DUP-6-16-22 | Dissolved Antimony | 10 |
| 200.8 | OW-60, OW-67 | Total Metals | 10 |
| 200.8 | OW-68 | Dissolved Metals | 10 |
| 8260B | MKTF-32 | MTBE | 20 |
| 200.8 | OW-67, MKTF-43, DUP-6-16-22 | Select Total and Dissolved Metals | 20 |
| 200.8 | MKTF-43 | Dissolved Arsenic and Selenium | 50 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 1.0°C and 4.7°C as noted on the CoC and the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature both within and outside the recommended range at 1.0°C and 2.1°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 68262 at a concentration of 0.019 mg/L. The sample EB-6-16-22 TPH DRO result detected below the laboratory reporting limit was qualified with a U flag. Results greater than the blank detection and/or the laboratory reporting limit but less than 10 times the blank concentration were qualified with a JB flag. Detections of this analyte in the associated samples greater than ten times the blank concentration did not require qualification.</p> <p>Pyrene was detected in the laboratory blank for Method 8270C SIM batch 68278 at a concentration of $0.36 \mu\text{g/L}$. The non-detection of this analyte in the associated sample MKTF-32 did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 68213 | Not Prepared |
| 200.7 | Total Metals | 68301 | Not Prepared |
| 200.7 | Dissolved Metals | A88936 | Not Prepared |
| 200.7 | Dissolved Metals | C88897 | EB-6-16-22 |
| 200.8 | Total Metals | 68213 | Not Prepared |
| 200.8 | Total Metals | 68301 | Not Prepared |
| 200.8 | Dissolved Metals | A88981 | Not Prepared |
| 200.8 | Dissolved Metals | C88918 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68220 | EB-6-16-22 |
| 245.1 | Total Mercury | 68247 | Not Prepared |
| 245.1 | Dissolved Mercury | 68304 | Not Prepared |
| 504.1 | EDB | 68190 | Not Prepared |
| 504.1 | EDB | 68319 | Not Prepared |
| 4500CN E | Cyanide | WG1886384 | OW-68, DUP-6-16-22 |
| 4500CN E | Cyanide | WG1886402 | Not Associated |
| 8015D | TPH DRO and MRO | 68262 | Not Prepared |
| 8015D | TPH GRO | A89029 | MKTF-41 |
| 8015D | TPH GRO | G88994 | Not Prepared |
| 8260B | VOCs | R89017 | Not Prepared |
| 8270C and 8270C SIM | SVOCs | 68218 | Not Prepared |
| 8270C and 8270C SIM | SVOCs | 68278 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 68213 | 53.3% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Zinc | 68301 | 137% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Cadmium | A88936 | 138% | ----- | 70-130% | ----- | ----- |
| 504.1 | EDB | 68319 | Acceptable | Acceptable | 70-130% | 21.9% | 20% |
| 8270C | Phenol | 68278 | Acceptable | Acceptable | 17-61.1% | 91.3% | 42.5% |
| 8270C SIM | 1-Methylnaphthalene | 68218 | 82.0% | Acceptable | 22.2-80.3% | Acceptable | 25% |
| 8270C SIM | 2-Methylnaphthalene | 68218 | 85.0% | Acceptable | 20.6-80.1% | Acceptable | 25% |
| 8270C SIM | Fluorene | 68218 | 93.0% | 88.0% | 33.3-86% | Acceptable | 26.4% |
| 8270C SIM | Phenanthrene | 68218 | 94.0% | Acceptable | 38.2-93.9% | Acceptable | 27.9% |
| 8270C SIM | Anthracene | 68218 | 127% | 102% | 41.1-95.6% | Acceptable | 25.6% |
| 8270C SIM | Fluoranthene | 68218 | 158% | Acceptable | 52.9-123% | Acceptable | 22.8% |
| 8270C SIM | Benzo(a)anthracene | 68218 | 170% | Acceptable | 51-147% | 33.1% | 24.1% |
| 8270C SIM | Benzo(b)fluoranthene | 68218 | Acceptable | Acceptable | 44.4-136% | 28.6% | 24.5% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | 68218 | Acceptable | 166% | 31.4-165% | 59.4% | 21.1% |
| 8270C SIM | 1,4-Dioxane | 68278 | 53.0% | 49.0% | 20.2-48.4% | Acceptable | 30.1% |
| 8270C SIM | Acenaphthene | 68278 | 85.0% | Acceptable | 29.8-82.7% | Acceptable | 27.8% |
| 8270C SIM | Fluorene | 68278 | 88.0% | Acceptable | 33.3-86% | Acceptable | 26.4% |
| 8270C SIM | Phenanthrene | 68278 | 96.0% | Acceptable | 38.2-93.9% | Acceptable | 27.9% |
| 8270 SIM | Fluoranthene | 68278 | Acceptable | Acceptable | 52.9-123% | 24.6% | 22.8% |

Total nickel with a MS percent recovery that was less than the lower laboratory QC limit was qualified as J- if detected and UJ if not detected in the associated samples due to evidence of potential low bias.

Analytes with LCS and/or LCSD recoveries greater than the laboratory or data validation QC limits were detected in the associated samples, and the results were qualified as J+ to indicate estimated concentrations that may be biased high. Non-detections of these analytes in the associated samples did not require qualification.

The analytes with LCS/LCSD RPD values that were above the QC limit were not detected in the associated samples. These results were qualified UJ due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|--------|--------------------|------------|
| 8015D | BFB | OW-60 | 145% | 70-130% |
| 8015D | BFB | OW-68 | 3,120% | 70-130% |
| 8270C | 2-Fluorophenol | OW-68 | 2.09% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-68 | 10.4% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | OW-68 | 2.60% | 18.6-129% |
| 8015D | BFB | OW-67 | 1,310% | 70-130% |



VALIDATION CRITERIA CHECKLIST

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------------|-------------|--------------------|------------|
| 8270C | 2-Fluorophenol | OW-67 | 1.47% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | OW-67 | 9.05% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | OW-67 | 0.0% | 18.6-129% |
| 8270C | 2-Fluorophenol | MKTF-43 | 1.31% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-43 | 8.24% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-43 | 2.35% | 18.6-129% |
| 8270C | 2-Fluorophenol | MKTF-41 | 6.97% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | MKTF-41 | 15.1% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | MKTF-41 | 11.4% | 18.6-129% |
| 8270C | Nitrobenzene-d ₅ | MKTF-41 | 32.5% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | MKTF-41 | 31.5% | 38.1-99.9% |
| 8270C | 2-Fluorophenol | DUP-6-16-22 | 1.27% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | DUP-6-16-22 | 7.83% | 28.5-64.7% |
| 8270C | 2,4,6-Tribromophenol | DUP-6-16-22 | 2.30% | 18.6-129% |

Since Method 8270C and Method 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the sample OW-60 Method 8270C analysis and the sample MKTF-41 Method 8270C SIM analysis, and qualification of sample data was not required.

The Method 8270C associated target analytes in samples OW-68, OW-67, MKTF-43, and DUP-6-16-22 with surrogate recoveries that were less than the lower laboratory QC limits, and 2 of 3 surrogate recoveries below 10%, were not detected in samples OW-68, OW-67, MKTF-43, and DUP-6-16-22. These results were qualified with R in the associated samples to indicate rejected (not usable) data based on evidence of extreme low bias (recovery less than 10%).

The Method 8270C associated target analyte in sample MKTF-41 with surrogate recoveries that were less than the lower laboratory QC limits were not detected in sample MKTF-41, and these results were qualified with UJ due to evidence of potential low bias.

TPH GRO was detected in samples OW-68 and OW-67, and these TPH GRO results were qualified as J+ due to evidence of potential high bias. TPH GRO was not detected in sample OW-60, and qualification of data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample FB-6-16-22, and one equipment blank sample, EB 6-16-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|------------------------|----------------------|
| Trip Blank | 8260B | 1,2,3-Trichlorobenzene | 0.25 µg/L |
| Trip Blank | 8260B | 1-Methylnaphthalene | 1.0 µg/L |
| Trip Blank | 8260B | 2-Methylnaphthalene | 1.0 µg/L |
| Trip Blank | 8260B | Acetone | 2.7 µg/L |
| Trip Blank | 8260B | Styrene | 0.14 µg/L |
| FB-6-16-22 | 8260B | Acetone | 3.6 µg/L |
| FB-6-16-22 | 8260B | Toluene | 0.24 µg/L |
| EB-6-16-22 | 200.7 | Dissolved Zinc | 0.0058 mg/L |
| EB-6-16-22 | 200.8 | Total Lead | 0.000065 mg/L |
| EB-6-16-22 | 8015D | TPH DRO | 0.039 mg/L |
| EB-6-16-22 | 8260B | Acetone | 3.4 µg/L |
| EB-6-16-22 | 8260B | Toluene | 0.43 µg/L |
| EB-6-16-22 | 8260B | Total Xylenes | 0.41 µg/L |

Detections of the identified analytes in the associated samples that were less than or equal to the blank results and/or less than or equal to the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc and total xylenes in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples and results greater than 10 times the blank detection did not require qualification.

The analytes 1,2,3-trichlorobenzene, 1-methylnaphthalene, and 2-methylnaphthalene were only reported in the trip blank sample, Trip Blank, or analyzed and reported by Method 8270C SIM. Qualification was not required.

The TPH DRO results in batch 68262 were previously qualified due to laboratory blank contamination; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-6-16-22 was collected as a field duplicate of sample MKTF-43.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1886384 | EB-6-16-22 |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | Laboratory Duplicate
Sample Source |
|----------|----------|-----------|---------------------------------------|
| 4500CN E | Cyanide | WG1886384 | OW-67 |
| 4500CN E | Cyanide | WG1886402 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for laboratory duplicates prepared from project samples were within laboratory acceptance limits or were not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| Sample ID | Analyte | Total Result
(mg/L) | Dissolved Result
(mg/L) |
|-------------|----------|------------------------|----------------------------|
| OW-68 | Cadmium | ND | 0.0020 mg/L |
| MKTF-43 | Nickel | ND | 0.0064 mg/L |
| DUP-6-16-22 | Nickel | ND | 0.0042 mg/L |
| MKTF-32 | Nickel | ND | 0.0038 mg/L |
| OW-60 | Silver | ND | 0.0029 mg/L |
| OW-68 | Silver | ND | 0.011 mg/L |
| OW-67 | Silver | ND | 0.020 mg/L |
| MKTF-43 | Silver | ND | 0.037 mg/L |
| DUP-6-16-22 | Silver | ND | 0.035 mg/L |
| MKTF-43 | Vanadium | ND | 0.0067 mg/L |
| DUP-6-16-22 | Vanadium | ND | 0.0057 mg/L |
| EB-6-16-22 | Zinc | ND | 0.0058 mg/L |

FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-43
Field Duplicate Sample ID: DUP-6-16-22 | | | | |
|---|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.040 mg/L | 0.040 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.077 mg/L | 0.071 mg/L | 8.1% |
| Cobalt, Total | E 200.7 | 0.031 mg/L | 0.028 mg/L | 10.2% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.0064 mg/L | 0.0042 mg/L | 41.5% +/-RL |
| Silver, Dissolved | E 200.7 | 0.037 mg/L | 0.035 mg/L | 5.6% |
| Vanadium, Dissolved | E 200.7 | 0.0067 mg/L | 0.0057 mg/L | 16.1% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0074 mg/L | 0.0055 mg/L | 29.5% +/-RL |
| Zinc, Total | E 200.7 | 0.021 mg/L | 0.022 mg/L | 4.7% +/-RL |
| Arsenic, Total | E200.8 | 0.0034 mg/L | 0.0034 mg/L | 0.0% +/-RL |
| Lead, Total | E200.8 | 0.0022 mg/L | 0.0022 mg/L | 0.0% +/-RL |
| TPH DRO | SW8015 | 0.15 mg/L | 0.15 mg/L | 0.0% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ECAL | The result exceeds the calibration range. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| MBD | Method blank detection |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 1,2,3-Trichlorobenzene | SW8260B | Trip Blank | 2206938-009a | 0.25 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-67 | 2206938-004a | 0.14 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dibromoethane | E504.1 | MKTF-43 | 2206938-005B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-41 | 2206938-006B | ND | 0.0095 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | DUP-6-16-22 | 2206938-008B | ND | 0.0092 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | Trip Blank | 2206938-009B | ND | 0.0095 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-32 | 2206938-010B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,3,5-Trimethylbenzene | SW8260B | OW-68 | 2206938-003a | 0.27 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.98 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dichlorobenzene | SW8270C | MKTF-41 | 2206938-006c | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dioxane | SW8270C | OW-60 | 2206938-002c | 0.24 | 1.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | MKTF-32 | 2206938-010c | 63 | 1.0 | µg/L | J+ | ECAL, HR-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-41 | 2206938-006c | 0.40 | 0.30 | µg/L | J+ | HR-LCS |
| 1-Methylnaphthalene | SW8260B | Trip Blank | 2206938-009a | 1.0 | 4.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-68 | 2206938-003c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-67 | 2206938-004c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-43 | 2206938-005c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-68 | 2206938-003c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-67 | 2206938-004c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-43 | 2206938-005c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-68 | 2206938-003c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-67 | 2206938-004c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-43 | 2206938-005c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-41 | 2206938-006c | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylnaphthalene | SW8270C | MKTF-41 | 2206938-006c | 0.28 | 0.30 | µg/L | J+ | HR-LCS, MDLRL |
| 2-Methylnaphthalene | SW8260B | Trip Blank | 2206938-009a | 1.0 | 4.0 | µg/L | J | MDLRL |
| 2-Methylphenol | SW8270C | OW-68 | 2206938-003c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-67 | 2206938-004c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-43 | 2206938-005c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-68 | 2206938-003c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-67 | 2206938-004c | ND | 10 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 3,4-Methylphenol | SW8270C | MKTF-43 | 2206938-005c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| Acetone | SW8260B | Trip Blank | 2206938-009a | 2.7 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-6-16-22 | 2206938-001a | 3.4 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-68 | 2206938-003a | 9.8 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | MKTF-41 | 2206938-006a | 3.2 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | FB-6-16-22 | 2206938-007a | 3.6 | 10 | µg/L | U | MDLRL, TBD |
| Arsenic, Dissolved | E200.8 | OW-60 | 2206938-002E | 0.0014 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-67 | 2206938-004E | 0.0027 | 0.020 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-60 | 2206938-002D | 0.0077 | 0.010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-68 | 2206938-003D | 0.020 | 0.020 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-67 | 2206938-004D | 0.0063 | 0.010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-43 | 2206938-005D | 0.0034 | 0.020 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-41 | 2206938-006D | 0.0025 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-6-16-22 | 2206938-008D | 0.0034 | 0.020 | mg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-41 | 2206938-006a | 0.28 | 1.0 | µg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | EB-6-16-22 | 2206938-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-60 | 2206938-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-68 | 2206938-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | OW-67 | 2206938-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | MKTF-43 | 2206938-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | MKTF-41 | 2206938-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(a)anthracene | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | EB-6-16-22 | 2206938-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-60 | 2206938-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | OW-68 | 2206938-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| Benzo(b)fluoranthene | SW8270C | OW-67 | 2206938-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | MKTF-43 | 2206938-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | MKTF-41 | 2206938-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzo(b)fluoranthene | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Benzoic Acid | SW8270C | OW-68 | 2206938-003c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-67 | 2206938-004c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | MKTF-43 | 2206938-005c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | MKTF-41 | 2206938-006c | ND | 20 | µg/L | UJ | LR-SUR |
| Beryllium, Total | E 200.7 | OW-60 | 2206938-002D | 0.0011 | 0.0020 | mg/L | J | MDLRL |
| Bis(2-ethylhexyl)phthalate | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| Cadmium, Dissolved | E 200.7 | OW-68 | 2206938-003E | 0.0020 | 0.0020 | mg/L | J+ | HR-LCS, MDLRL |
| Chromium, Dissolved | E 200.7 | OW-60 | 2206938-002E | 0.0054 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-67 | 2206938-004D | 0.014 | 0.030 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-67 | 2206938-004D | 0.029 | 0.030 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | DUP-6-16-22 | 2206938-008D | 0.028 | 0.030 | mg/L | J | MDLRL |
| Diethylphthalate | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | MKTF-41 | 2206938-006c | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-octylphthalate | SW8270C | MKTF-41 | 2206938-006c | ND | 20 | µg/L | UJ | LR-SUR |
| Ethylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.83 | 1.0 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | MKTF-32 | 2206938-010c | ND | 0.30 | µg/L | UJ | HR-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-6-16-22 | 2206938-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-60 | 2206938-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-68 | 2206938-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-67 | 2206938-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-43 | 2206938-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-41 | 2206938-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.30 | 1.0 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-32 | 2206938-010E | 0.000087 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-43 | 2206938-005D | 0.0022 | 0.010 | mg/L | U | EBD, MDLRL |
| Lead, Total | E200.8 | MKTF-41 | 2206938-006D | 0.00011 | 0.00050 | mg/L | U | EBD, MDLRL |
| Lead, Total | E200.8 | DUP-6-16-22 | 2206938-008D | 0.0022 | 0.010 | mg/L | U | EBD, MDLRL |
| Lead, Total | E200.8 | EB-6-16-22 | 2206938-001D | 0.000065 | 0.00050 | mg/L | J | MDLRL |
| MTBE | SW8260B | OW-60 | 2206938-002a | 0.43 | 1.0 | µg/L | J | MDLRL |
| MTBE | SW8260B | OW-68 | 2206938-003a | 0.71 | 1.0 | µg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-41 | 2206938-006a | 0.65 | 1.0 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | MKTF-41 | 2206938-006c | 0.28 | 0.30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-68 | 2206938-003a | 0.67 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.26 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-60 | 2206938-002E | 0.0037 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-43 | 2206938-005E | 0.0064 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | DUP-6-16-22 | 2206938-008E | 0.0042 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-32 | 2206938-010E | 0.0038 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-60 | 2206938-002D | 0.077 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-68 | 2206938-003D | 0.18 | 0.050 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | OW-67 | 2206938-004D | 0.14 | 0.050 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-6-16-22 | 2206938-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-43 | 2206938-005D | ND | 0.050 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-41 | 2206938-006D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | DUP-6-16-22 | 2206938-008D | ND | 0.050 | mg/L | UJ | LR-LCS |
| n-Propylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.35 | 1.0 | µg/L | J | MDLRL |
| Phenol | SW8270C | OW-68 | 2206938-003c | ND | 20 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Phenol | SW8270C | OW-67 | 2206938-004c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | MKTF-43 | 2206938-005c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | DUP-6-16-22 | 2206938-008c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | MKTF-41 | 2206938-006c | ND | 20 | µg/L | UJ | LR-SUR |
| Phenol | SW8270C | MKTF-32 | 2206938-010c | ND | 20 | µg/L | UJ | ERPD-LCS |
| p-Isopropyltoluene | SW8260B | OW-68 | 2206938-003a | 0.29 | 1.0 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-41 | 2206938-006a | 0.26 | 1.0 | µg/L | J | MDLRL |
| Pyridine | SW8270C | MKTF-41 | 2206938-006c | ND | 40 | µg/L | UJ | LR-SUR |
| sec-Butylbenzene | SW8260B | OW-68 | 2206938-003a | 0.65 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-41 | 2206938-006a | 0.18 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-32 | 2206938-010a | 0.44 | 2.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-68 | 2206938-003E | 0.0075 | 0.010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-68 | 2206938-003D | 0.016 | 0.020 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-32 | 2206938-010D | 0.00052 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-60 | 2206938-002E | 0.0029 | 0.0050 | mg/L | J | MDLRL |
| Styrene | SW8260B | Trip Blank | 2206938-009a | 0.14 | 1.0 | µg/L | J | MDLRL |
| Styrene | SW8260B | OW-68 | 2206938-003a | 0.14 | 1.0 | µg/L | U | MDLRL, TBD |
| Styrene | SW8260B | MKTF-41 | 2206938-006a | 0.21 | 1.0 | µg/L | U | MDLRL, TBD |
| Toluene | SW8260B | OW-68 | 2206938-003a | 1.0 | 1.0 | µg/L | U | FBD |
| Toluene | SW8260B | EB-6-16-22 | 2206938-001a | 0.43 | 1.0 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | OW-60 | 2206938-002a | 0.24 | 1.0 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | MKTF-41 | 2206938-006a | 0.21 | 1.0 | µg/L | U | FBD, MDLRL |
| Toluene | SW8260B | FB-6-16-22 | 2206938-007a | 0.24 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-60 | 2206938-002C | 0.082 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | MKTF-43 | 2206938-005C | 0.15 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | DUP-6-16-22 | 2206938-008C | 0.15 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-6-16-22 | 2206938-001C | 0.039 | 0.064 | mg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | OW-68 | 2206938-003a | 0.95 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-67 | 2206938-004a | 0.27 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-41 | 2206938-006a | 0.038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-60 | 2206938-002E | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-68 | 2206938-003E | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-67 | 2206938-004E | 0.0055 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-43 | 2206938-005E | 0.0067 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-41 | 2206938-006E | 0.027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-6-16-22 | 2206938-008E | 0.0057 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-32 | 2206938-010E | 0.0049 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-68 | 2206938-003D | 0.024 | 0.25 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-67 | 2206938-004D | 0.042 | 0.25 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-41 | 2206938-006D | 0.028 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-32 | 2206938-010D | 0.0085 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-68 | 2206938-003a | 4.1 | 1.5 | µg/L | JB | EBD |
| Xylenes, Total | SW8260B | EB-6-16-22 | 2206938-001a | 0.41 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-60 | 2206938-002E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-68 | 2206938-003E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-67 | 2206938-004E | 0.0072 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-43 | 2206938-005E | 0.0074 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-41 | 2206938-006E | 0.0075 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-16-22 | 2206938-008E | 0.0055 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-32 | 2206938-010E | 0.0087 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-16-22 | 2206938-001E | 0.0058 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-60 | 2206938-002D | 0.12 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Total | E 200.7 | MKTF-41 | 2206938-006D | 0.016 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Total | E 200.7 | MKTF-32 | 2206938-010D | 0.011 | 0.010 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Total | E 200.7 | OW-68 | 2206938-003D | 0.039 | 0.050 | mg/L | J+ | HR-LCS, MDLRL |
| Zinc, Total | E 200.7 | OW-67 | 2206938-004D | 0.035 | 0.050 | mg/L | J+ | HR-LCS, MDLRL |
| Zinc, Total | E 200.7 | MKTF-43 | 2206938-005D | 0.021 | 0.050 | mg/L | J+ | HR-LCS, MDLRL |
| Zinc, Total | E 200.7 | DUP-6-16-22 | 2206938-008D | 0.022 | 0.050 | mg/L | J+ | HR-LCS, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 06/30/2022 |
| Date Validated: 01/16/2023 | Sample End Date: 06/30/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2207002 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-6-30-22 | 2207002-001 |
| OW-14 | 2207002-002 |
| OW-30 | 2207002-003 |
| DUP-6-30-22 | 2207002-004 |
| FB-6-30-22 | 2207002-005 |
| Trip Blank | 2207002-006 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 270 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? Yes

Comments: The laboratory did not report non-conformances related to the analytical data for this sample set.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

The analyses required for sample Trip Blank were not identified on the CoC for this sample set. The laboratory assigned and completed the appropriate analyses for this sample type. Further validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|--------------------|----------------------------|-----------------|
| 200.7 | OW-14, DUP-6-30-22 | Total and Dissolved Barium | 5 |
| 8260B | OW-30 | Select VOCs | 5 |
| 8015D | OW-14, DUP-6-30-22 | TPH GRO | 20 |
| 8260B | OW-14, DUP-6-30-22 | Select VOCs | 50 |
| 8260B | OW-30 | MTBE | 50 |
| 8260B | OW-14, DUP-6-30-22 | Benzene | 500 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 2.2°C and 2.3°C as noted on the CoC and the Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.4°C as noted on the CoC.

The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

TPH DRO was detected in the laboratory blank for Method 8015D batch 68572 at a concentration of 0.022 mg/L. TPH DRO was detected in the associated sample EB-6-30-22 at a concentration less than the laboratory reporting limit and the result was qualified with a U flag. TPH DRO was detected in the associated samples at concentrations above the reporting limit and greater than ten times the blank concentration and the results did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 68545 | EB-6-30-22 |
| 200.7 | Dissolved Metals | B89290 | EB-6-30-22 |
| 200.8 | Total Metals | 68545 | OW-14 |
| 200.8 | Dissolved Metals | A89215 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 68567 | Not Prepared |
| 504.1 | EDB | 68566 | Not Prepared |
| 4500CN E | Cyanide | WG1893803 | Not Associated |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------|--------|------------------|
| 8015D | TPH DRO and MRO | 68572 | Not Prepared |
| 8015D | TPH GRO | G89271 | Not Prepared |
| 8260B | VOCs | R89347 | Not Prepared |
| 8270C SIM | SVOCs | 68563 | Not Prepared |
| 8270C | SVOCs | 68563 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSD prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|--------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 68545 | 132% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 68572 | 77.8% | Acceptable | 31.7-75.4% | 25.5% | 20% |
| 8270C | Pyrene | 68563 | 60.3% | 57.4% | 61-123% | Acceptable | 11.8% |
| 8270C SIM | 1,4-Dioxane | 68563 | 51.0% | 53.0% | 20.2-48.4% | Acceptable | 30.1% |
| 8270C SIM | Acenaphthene | 68563 | Acceptable | 83.0% | 29.8-82.7% | Acceptable | 27.8% |
| 8270C SIM | Fluorene | 68563 | Acceptable | 87.0% | 33.3-86% | Acceptable | 26.4% |
| 8270C SIM | Phenanthrene | 68563 | Acceptable | 94.0% | 38.2-93.9% | Acceptable | 27.9% |

Pyrene was detected in sample EB-6-30-22 and the result was qualified as J- due to evidence of potential low bias. Pyrene was not detected in the remaining associated samples and the results were assigned UJ qualifiers.

Detections of the remaining identified analytes in the associated samples were qualified as J+ due to evidence of potential high bias. Non-detection of these analytes in the associated samples did not require qualification.

TPD DRO was detected in the associated samples and the results were qualified as J due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|-------------|--------------------|------------|
| 8270C | 2-Fluorophenol | EB-6-30-22 | 24.7% | 29.4-87.7% |
| 8270C | Phenol-d ₅ | EB-6-30-22 | 18.1% | 28.5-64.7% |
| 8270C | Nitrobenzene-d ₅ | EB-6-30-22 | 33.1% | 36.9-103% |
| 8270C | 2-Fluorobiphenyl | EB-6-30-22 | 32.2% | 38.1-99.9% |
| 8270C | 4-Terphenyl-d ₁₄ | EB-6-30-22 | 47.0% | 48-155% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | EB-6-30-22 | 48.8% | 72.3-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | OW-30 | 67.2% | 72.3-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | DUP-6-30-22 | 67.6% | 72.3-147% |

Since Method 8270C and 8270C-SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C-SIM analyses of samples EB-6-30-22, OW-30, and DUP-6-30-22, and qualification of sample data was not required. **Di-n-butyl phthalate was detected in the Method 8270C analysis of sample EB-6-30-22, and this result was qualified as J- due to evidence of potential low bias. The remaining Method 8270C SVOC analytes were not detected in sample EB-6-30-22, and these results were qualified as UJ due to the evidence of potential low bias.**

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 6-30-22, and one equipment blank sample, EB-6-30-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip, field, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|---------------------|---------------|
| Trip Blank | 8260B | Acetone | 3.8 µg/L |
| EB-6-30-22 | 200.7 | Dissolved Zinc | 0.0067 mg/L |
| EB-6-30-22 | 8015D | TPH DRO | 0.047 mg/L |
| EB-6-30-22 | 8260B | Toluene | 0.20 µg/L |
| EB-6-30-22 | 8270C | Di-n-butylphthalate | 17 µg/L |
| EB-6-30-22 | 8270C | Pyrene | 0.34 µg/L |

Detections of dissolved zinc in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 68572 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.



VALIDATION CRITERIA CHECKLIST

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-6-30-22 was collected as a field duplicate of sample OW-14.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1893803 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-14 | Barium | 2.3 | 2.4 |
| OW-30 | Nickel | 0.088 | 0.089 |
| OW-14 | Zinc | 0.0071 | 0.0084 |
| OW-30 | Zinc | 0.0097 | 0.013 |
| DUP-6-30-22 | Zinc | 0.0090 | 0.0092 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-14
Field Duplicate Sample ID: DUP-6-30-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 2.4 mg/L | 2.4 mg/L | 0.0% |
| Barium, Total | E 200.7 | 2.3 mg/L | 2.5 mg/L | 8.3% |
| Cobalt, Dissolved | E 200.7 | 0.0077 mg/L | 0.0079 mg/L | 2.6% +/-RL |
| Cobalt, Total | E 200.7 | 0.010 mg/L | 0.0095 mg/L | 5.1% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.097 mg/L | 0.10 mg/L | 3.0% |
| Nickel, Total | E 200.7 | 0.10 mg/L | 0.10 mg/L | 0.0% |
| Zinc, Dissolved | E 200.7 | 0.0084 mg/L | 0.0092 mg/L | 9.1% +/-RL |
| Zinc, Total | E 200.7 | 0.0071 mg/L | 0.0090 mg/L | 23.6% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0034 mg/L | 0.0032 mg/L | 6.1% |
| Arsenic, Total | E200.8 | 0.0038 mg/L | 0.0038 mg/L | 0.0% |
| Lead, Total | E200.8 | 0.00074 mg/L | 0.00051 mg/L | 36.8% +/-RL |
| Cyanide, Total | E335.4 | ND (0.00500 mg/L) | 0.00873 mg/L | DL |
| TPH DRO | SW8015 | 2.5 mg/L | 2.1 mg/L | 17.4% |
| TPH GRO | SW8015 | 61 mg/L | 61 mg/L | 0.0% |
| TPH ORO | SW8015 | ND (0.080 mg/L) | 0.074 mg/L | DL |
| Benzene | SW8260B | 22,000 µg/L | 23,000 µg/L | 4.4% |
| Ethylbenzene | SW8260B | 930 µg/L | 870 µg/L | 6.7% |
| Isopropylbenzene | SW8260B | 19 µg/L | 18 µg/L | 5.4% +/-RL |
| MTBE | SW8260B | 610 µg/L | 600 µg/L | 1.7% |
| n-Propylbenzene | SW8260B | 50 µg/L | 47 µg/L | 6.2% +/-RL |
| 1,4-Dioxane | SW8270C | ND (1.0 µg/L) | 1.3 µg/L | DL |
| 1-Methylnaphthalene | SW8270C | 17 µg/L | 16 µg/L | 6.1% |
| Acenaphthene | SW8270C | 0.48 µg/L | 0.46 µg/L | 4.3% +/-RL |
| Fluorene | SW8270C | 0.68 µg/L | 0.62 µg/L | 9.2% |
| Naphthalene | SW8270C | 15 µg/L | 14 µg/L | 6.9% |
| Phenanthrene | SW8270C | 0.36 µg/L | 0.30 µg/L | 18.2% +/-RL |
| Phenol | SW8270C | 38 µg/L | 34 µg/L | 11.1% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| EBD | Equipment blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,4-Dichlorobenzene | SW8270C | EB-6-30-22 | 2207002-001C | ND | 5.0 | µg/L | UJ | LR-SUR |
| 1,4-Dioxane | SW8270C | DUP-6-30-22 | 2207002-004c | 1.3 | 1.0 | µg/L | J+ | HR-LCS |
| 1,4-Dioxane | SW8270C | OW-30 | 2207002-003c | 0.50 | 1.0 | µg/L | J+ | HR-LCS, MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Acenaphthene | SW8270C | OW-14 | 2207002-002c | 0.48 | 0.30 | µg/L | J+ | HR-LCS |
| Acenaphthene | SW8270C | DUP-6-30-22 | 2207002-004c | 0.46 | 0.30 | µg/L | J+ | HR-LCS |
| Acetone | SW8260B | Trip Blank | 2207002-006a | 3.8 | 10 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-30 | 2207002-003c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-30 | 2207002-003E | 0.00079 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-30 | 2207002-003D | 0.00092 | 0.0010 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | EB-6-30-22 | 2207002-001C | ND | 20 | µg/L | UJ | LR-SUR |
| Bis(2-ethylhexyl)phthalate | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|------------------|
| Cobalt, Dissolved | E 200.7 | OW-30 | 2207002-003E | 0.0037 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-30 | 2207002-003D | 0.0043 | 0.0060 | mg/L | J | MDLRL |
| Diethylphthalate | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Dimethylphthalate | SW8270C | EB-6-30-22 | 2207002-001C | ND | 10 | µg/L | UJ | LR-SUR |
| Di-n-butylphthalate | SW8270C | EB-6-30-22 | 2207002-001C | 17 | 10 | µg/L | J- | LR-SUR |
| Di-n-octylphthalate | SW8270C | EB-6-30-22 | 2207002-001C | ND | 20 | µg/L | UJ | LR-SUR |
| Fluorene | SW8270C | OW-14 | 2207002-002c | 0.68 | 0.30 | µg/L | J+ | HR-LCS |
| Fluorene | SW8270C | DUP-6-30-22 | 2207002-004c | 0.62 | 0.30 | µg/L | J+ | HR-LCS |
| Isopropylbenzene | SW8260B | OW-14 | 2207002-002a | 19 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | DUP-6-30-22 | 2207002-004a | 18 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-30 | 2207002-003E | 0.00035 | 0.00050 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | OW-14 | 2207002-002D | 0.10 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-30 | 2207002-003D | 0.088 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | DUP-6-30-22 | 2207002-004D | 0.10 | 0.010 | mg/L | J+ | HR-LCS |
| n-Propylbenzene | SW8260B | DUP-6-30-22 | 2207002-004a | 47 | 50 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | OW-14 | 2207002-002c | 0.36 | 0.30 | µg/L | J+ | HR-LCS |
| Phenanthrene | SW8270C | DUP-6-30-22 | 2207002-004c | 0.30 | 0.30 | µg/L | J+ | HR-LCS |
| Phenol | SW8270C | EB-6-30-22 | 2207002-001C | ND | 20 | µg/L | UJ | LR-SUR |
| Pyrene | SW8270C | OW-14 | 2207002-002c | ND | 1.0 | µg/L | UJ | LR-LCS |
| Pyrene | SW8270C | OW-30 | 2207002-003c | ND | 1.0 | µg/L | UJ | LR-LCS |
| Pyrene | SW8270C | DUP-6-30-22 | 2207002-004c | ND | 1.0 | µg/L | UJ | LR-LCS |
| Pyrene | SW8270C | EB-6-30-22 | 2207002-001c | 0.34 | 1.0 | µg/L | J- | LR-LCS, MDLRL |
| Pyridine | SW8270C | EB-6-30-22 | 2207002-001C | ND | 40 | µg/L | UJ | LR-SUR |
| Toluene | SW8260B | EB-6-30-22 | 2207002-001a | 0.20 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-14 | 2207002-002C | 2.5 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-30 | 2207002-003C | 2.6 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | DUP-6-30-22 | 2207002-004C | 2.1 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|------------------------------|
| TPH DRO | SW8015 | EB-6-30-22 | 2207002-001C | 0.047 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH ORO | SW8015 | OW-30 | 2207002-003C | 0.056 | 0.080 | mg/L | U | MBD, MDLRL |
| TPH ORO | SW8015 | DUP-6-30-22 | 2207002-004C | 0.074 | 0.080 | mg/L | U | MBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-30 | 2207002-003E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-14 | 2207002-002E | 0.0084 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-6-30-22 | 2207002-004E | 0.0092 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-6-30-22 | 2207002-001E | 0.0067 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-14 | 2207002-002D | 0.0071 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-30 | 2207002-003D | 0.0097 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | DUP-6-30-22 | 2207002-004D | 0.0090 | 0.010 | mg/L | J | MDLRL |





Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix D-3. 3rd Quarter Data Validation Reports



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/20/2022 |
| Date Validated: 01/24/2023 | Sample End Date: 09/20/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Per- and Polyfluorinated Alkyl Substances (PFAS) by Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS) and Isotope Dilution (ID) | |
| Laboratory Project ID: 2209A41 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee, and Vista Analytical Laboratory of El Dorado Hills, California, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-20-22 | 2209A41-001 |
| EB-09-20-22 | 2209A41-002 |
| OW-63 | 2209A41-003 |
| OW-58A | 2209A41-004 |
| OW-58 | 2209A41-005 |
| OW-64 | 2209A41-006 |
| STP-1-NW | 2209A41-007 |
| OW-60 | 2209A41-008 |
| OW-68 | 2209A41-009 |
| OW-67 | 2209A41-010 |
| FB 9-20-22 | 2209A41-011 |
| DUP 9-20-22 | 2209A41-012 |
| Trip Blank | 2209A41-013 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ⊗ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Data review and evaluation was performed following criteria set forth in Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537, document number EPA 910-R-18-001, November 2018.
- Data were reviewed and evaluated according to criteria set forth in the Department of Defense (DoD) / Department of Energy (DOE) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3, 2019.





Tier II Data Validation Report Summary

- Data were reviewed and evaluated according to criteria set forth in Data Validation Guidelines Module 3: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-15, United States Department of Defense, Environmental Data Quality Workgroup, May 2020.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| Qualifier | Definition |
|-----------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 810 data points. The data completeness calculation does not include any submitted blank sample results. Fourteen data points were rejected. The data completeness measure for this data package is calculated to be 98.27% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for sample OW-58, OW-58A, OW-63, Dup 9-20-22.

Method 8015D DRO: The LCS/LCSD had slightly elevated recoveries.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

E – Estimated value. **TPH DRO and TPH MRO results were flagged by the laboratory with the E flag in the submitted samples. These results were assigned J qualifiers if detected, and non-detections were assigned UJ due to this lab identified non-conformance.**

J – Analyte detected below quantitation limits.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The trip blank sample was received but was not included on the CoC. The laboratory logged in the sample and performed the appropriate volatile analysis. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|---------------------------|-----------------------------------|-----------------|
| 8015D | OW-58 | TPH DRO and MRO | 2 |
| 200.7 | Multiple Samples | Total and Dissolved Barium | 5 |
| 200.8 | OW-67, OW-68 | Select Total and Dissolved Metals | 5 |
| 245.1 | OW-67 | Total Mercury | 5 |
| 8015D | OW-58A | TPH DRO and MRO | 5 |
| 8015D | DUP 9-20-22 | TPH DRO and MRO | 10 |
| 8015D | OW-58A | TPH GRO | 20 |
| 8260B | OW-58A | Select VOC | 20 |
| 8015D | OW-63, OW-58, DUP 9-20-22 | TPH GRO | 50 |
| 8260B | OW-63, OW-58, DUP 9-20-22 | Select VOC | 50 |
| 8260B | OW-58A | Benzene, Toluene | 200 |
| 8260B | OW-58, DUP 9-20-22 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 3.1°C and 5.4°C as noted on the Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.0°C as noted on the CoC. Samples transferred to Vista Analytical Laboratory were received in good condition with the cooler temperature outside the recommended range at 1.4°C as noted on the CoC and the Sample Login Checklist.</p> <p>The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | No |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> <p>PFAS Method: Samples EB-09-20-22 and OW-63 were extracted for PFAs outside the defined holding time of 14 days by approximately 21 days. Detected results for samples EB-09-20-22 and OW-63 by Method PFAS were assigned J qualifiers based on the holding time exceedances. Non-detect results were assigned UJ qualifiers based on the holding time exceedances.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of nanograms per liter (ng/L), micrograms per liter ($\mu\text{g/L}$), and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|---------|-------|---------------|
| 8015D | TPH DRO | 70323 | 0.021 mg/L |
| 8015D | TPH DRO | 70376 | 0.025 mg/L |

The detection of TPH DRO in the associated sample EB-09-20-22 that was less than the applicable reporting limit was assigned a U qualifier. TPH DRO results in samples OW-60 and STP-1-NW that were greater than the blank detection and/or the laboratory reporting limit but less than 10 times the blank concentration were qualified with JB flags. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-------------|-----------------------------|-----------|-----------------------------|
| 200.7 | Total Metals | 70359 | Not Prepared |
| 200.7 | Dissolved Silver | A91423 | DUP 9-20-22 |
| 200.7 | Dissolved Silver | A91594 | EB-09-20-22 |
| 200.7 | Dissolved Metals | B91392 | Not Prepared |
| 200.8 | Total Metals | 70359 | Not Prepared |
| 200.8 | Dissolved Metals | B91237 | EB-09-20-22 |
| 245.1 | Total and Dissolved Mercury | 70390 | OW-67 |
| 504.1 | EDB | 70321 | DUP 9-20-22 |
| PFAS Method | PFAs | B22J201 | Not Prepared |
| 4500CN E | Cyanide | WG1930995 | Not Associated, EB-09-20-22 |
| 8015D | TPH DRO and MRO | 70323 | Not Prepared |
| 8015D | TPH DRO and MRO | 70376 | Not Prepared |
| 8015D | TPH GRO | A91300 | Not Prepared |
| 8015D | TPH GRO | R91291 | OW-63 |
| 8260B | VOCs | R91223 | Not Prepared |
| 8270C SIM | SVOCs | 70340 | Not Prepared |
| 8270C | SVOCs | 70340 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

The LCS and LCSD recoveries for TPH DRO in Method 8015D batch 70376 were outside the acceptance limits of 31.7-75.4% at 77.7% and 76.9%, respectively, indicating a potential high bias. Associated samples with detections for TPH DRO or TPH MRO were qualified with J+ flags due to potential high bias. Associated samples with non-detections for TPH DRO or TPH MRO did not require qualification.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|----------|-----------------------------|-------------|--------------------|------------|
| 8270 SIM | Nitrobenzene-d ₅ | EB-09-20-22 | 23.3% | 31.6-100% |
| 8270 SIM | 2-Fluorobiphenyl | EB-09-20-22 | 25.5% | 26.7-90.1% |
| 8270 SIM | 4-Terphenyl-d ₁₄ | EB-09-20-22 | 31.9% | 72.3-147% |
| 8015D | BFB | OW-58A | 171% | 70-130% |
| 8015D | BFB | OW-64 | 278% | 70-130% |
| 8015D | BFB | OW-60 | 189% | 70-130% |
| 8015D | BFB | OW-68 | 3,180% | 70-130% |
| 8270C | 2-Fluorophenol | OW-68 | 2.59% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-68 | 10.2% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | OW-68 | 2.97% | 15-108% |
| 8015D | BFB | OW-67 | 1,060% | 70-130% |
| 8270C | 2-Fluorophenol | OW-67 | 0.299% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-67 | 0.653% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | OW-67 | 0.0% | 15-108% |

TPH GRO was detected in the Method 8015D analysis of samples OW-58A, OW-64, OW-68, and OW-67, and these results were qualified as J+ to indicate a potential high bias. TPH GRO was not detected in sample OW-60, and qualification of data was not required.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of samples OW-63, OW-58A, OW-58, OW-64, STP-1-NW, OW-60, OW-68, OW-67, and DUP 9-20-22, and for the Method 8270C analysis of samples EB-09-20-22 and OW-58A, and qualification of sample data was not required.

The analyte pyrene was detected in the sample EB-09-20-22 Method 8270C SIM analysis, and this result was qualified as J- due to evidence of potential low bias. The remaining associated analytes in the sample EB-09-20-22 Method 8270C SIM analysis were not detected, and these results were qualified as UJ.

The analytes in the acid fraction of samples OW-68 and OW-67 were not detected. Since at least 2 of 3 surrogates were recovered below 10%, these results were qualified as R to indicate rejected (not usable) data based on evidence of extreme low bias.



VALIDATION CRITERIA CHECKLIST

The TPH DRO and TPH MRO results for sample DUP 9-20-22 were not qualified based on the surrogate non-conformance in the Method 8015D analysis since the applied dilution of 10 times resulted in a surrogate concentration below routinely calibrated levels, and that result was deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-20-22, and one equipment blank sample, EB-09-20-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|------------------|---------------------------|----------------------|
| Trip Blank | 8260B | Acetone | 6.8 µg/L |
| FB 9-20-22 | 8260B | Acetone | 11 µg/L |
| EB-09-20-22 | 200.7 | Dissolved Chromium | 0.0023 mg/L |
| EB-09-20-22 | 200.7 | Dissolved Vanadium | 0.0022 mg/L |
| EB-09-20-22 | 200.7 | Dissolved Zinc | 0.0066 mg/L |
| EB-09-20-22 | 8015D | TPH DRO | 0.027 mg/L |
| EB-09-20-22 | 8260B | Acetone | 7.0 µg/L |
| EB-09-20-22 | 8270C | Di-n-butylphthalate | 12 µg/L |
| EB-09-20-22 | 8270C SIM | Pyrene | 0.34 µg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of acetone and dissolved zinc in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batches 70323 and 70376 were previously qualified due to laboratory blank detections; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP 9-20-22 was collected as a field duplicate of sample OW-58A.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD values for multiple analytes exceeded the data validation limit of 30%. The results for these analytes in samples OW-58A and DUP 9-20-22 were assigned J qualifiers due to evidence of poor precision.

The RPD value for TPH DRO greatly exceeded the data validation limit of 30% at 113.7%. The reported results for TPH DRO were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for TPH DRO in the associated samples due to evidence of extremely poor precision (RPD > 100%).

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1930995 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-58 | Mercury | ND | 0.00016 |
| OW-64 | Mercury | 0.00016 | 0.00017 |
| OW-68 | Mercury | 0.00025 | 0.00027 |
| OW-64 | Arsenic | 0.0024 | 0.0026 |
| EB-09-20-22 | Chromium | ND | 0.0023 |
| OW-58 | Nickel | 0.037 | 0.038 |
| OW-58 | Selenium | ND | 0.00044 |
| STP-1-NW | Selenium | 0.0050 | 0.0059 |
| OW-63 | Silver | ND | 0.0015 |
| OW-58 | Silver | ND | 0.0013 |
| STP-1-NW | Silver | ND | 0.0020 |
| OW-60 | Silver | ND | 0.0021 |
| OW-68 | Silver | 0.0059 | 0.0087 |
| OW-67 | Silver | 0.015 | 0.020 |



VALIDATION CRITERIA CHECKLIST

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| DUP 9-20-22 | Silver | ND | 0.0016 |
| EB-09-20-22 | Vanadium | ND | 0.0022 |
| OW-63 | Vanadium | ND | 0.0045 |
| OW-58 | Vanadium | 0.0045 | 0.0050 |
| OW-64 | Vanadium | 0.0068 | 0.0074 |
| STP-1-NW | Vanadium | 0.0033 | 0.0039 |
| EB-09-20-22 | Zinc | ND | 0.0066 |
| OW-63 | Zinc | ND | 0.012 |
| OW-58 | Zinc | ND | 0.0059 |
| OW-64 | Zinc | ND | 0.038 |
| OW-68 | Zinc | 0.013 | 0.036 |
| OW-67 | Zinc | 0.011 | 0.035 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-58A
Field Duplicate Sample ID: DUP 9-20-22 | | | | |
|--|----------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.92 mg/L | 0.90 mg/L | 2.2% |
| Barium, Total | E 200.7 | 1.1 mg/L | 1.1 mg/L | 0.0% |
| Chromium, Total | E 200.7 | 0.0045 mg/L | 0.0037 mg/L | 19.5% +/-RL |
| Cobalt, Total | E 200.7 | ND (0.0060 mg/L) | 0.0086 mg/L | DL |
| Nickel, Dissolved | E 200.7 | 0.038 mg/L | 0.035 mg/L | 8.2% |
| Nickel, Total | E 200.7 | 0.037 mg/L | 0.037 mg/L | 0.0% |
| Silver, Dissolved | E 200.7 | ND (0.0050 mg/L) | 0.0016 mg/L | DL |
| Vanadium, Dissolved | E 200.7 | 0.0059 mg/L | 0.0045 mg/L | 26.9% +/-RL |
| Vanadium, Total | E 200.7 | 0.016 mg/L | 0.020 mg/L | 22.2% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | 0.0099 mg/L | 10.5% +/-RL |
| Zinc, Total | E 200.7 | 0.014 mg/L | 0.013 mg/L | 7.4% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0036 mg/L | 0.0037 mg/L | 2.7% |
| Arsenic, Total | E200.8 | 0.0047 mg/L | 0.0050 mg/L | 6.2% |
| Lead, Dissolved | E200.8 | 0.0012 mg/L | 0.0011 mg/L | 8.7% |
| Lead, Total | E200.8 | 0.012 mg/L | 0.0089 mg/L | 29.7% |
| Selenium, Dissolved | E200.8 | 0.00042 mg/L | ND (0.0010 mg/L) | DL |
| Selenium, Total | E200.8 | 0.00081 mg/L | 0.00070 mg/L | 14.6% +/-RL |
| TPH DRO | SW8015 | 16 mg/L | 4.4 mg/L | 113.7% |
| TPH GRO | SW8015 | 58 mg/L | 46 mg/L | 23.1% |
| 1,2,4-Trimethylbenzene | SW8260B | 780 µg/L | 520 µg/L | 40.0% |
| 1,3,5-Trimethylbenzene | SW8260B | 210 µg/L | 140 µg/L | 40.0% |
| Benzene | SW8260B | 8900 µg/L | 8700 µg/L | 2.3% |
| Ethylbenzene | SW8260B | 1000 µg/L | 840 µg/L | 17.4% |
| Isopropylbenzene | SW8260B | 71 µg/L | 58 µg/L | 20.2% |
| MTBE | SW8260B | 2200 µg/L | 2200 µg/L | 0.0% |
| n-Butylbenzene | SW8260B | 19 µg/L | 19 µg/L | 0.0% +/-RL |
| n-Propylbenzene | SW8260B | 130 µg/L | 110 µg/L | 16.7% |
| p-Isopropyltoluene | SW8260B | 13 µg/L | 12 µg/L | 8.0% +/-RL |
| sec-Butylbenzene | SW8260B | 16 µg/L | 14 µg/L | 13.3% +/-RL |
| Toluene | SW8260B | 6,300 µg/L | 4,600 µg/L | 31.2% |
| Xylenes, Total | SW8260B | 4,300 µg/L | 3,100 µg/L | 32.4% |
| 1-Methylnaphthalene | SW8270C | 76 µg/L | 64 µg/L | 17.1% |
| 2,4-Dimethylphenol | SW8270C | 6.5 µg/L | 7.7 µg/L | 16.9% +/-RL |
| 2-Methylnaphthalene | SW8270C | 87 µg/L | 71 µg/L | 20.3% |
| 2-Methylphenol | SW8270C | 11 µg/L | 8.5 µg/L | 25.6% +/-RL |



| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
|--------------------|----------------|-------------------|------------------|-----------------------------------|
| 3,4-Methylphenol | SW8270C | 5.4 µg/L | ND (10 µg/L) | DL |
| Acenaphthene | SW8270C | 2.6 µg/L | 2.3 µg/L | 12.2% |
| Anthracene | SW8270C | 0.66 µg/L | 0.48 µg/L | 31.6% |
| Benzo(a)anthracene | SW8270C | 0.20 µg/L | ND (0.30 µg/L) | DL |
| Fluoranthene | SW8270C | 0.50 µg/L | 0.34 µg/L | 38.1% +/-RL |
| Fluorene | SW8270C | 4.7 µg/L | 3.9 µg/L | 18.6% |
| Naphthalene | SW8270C | 160 µg/L | 130 µg/L | 20.7% |
| Phenanthrene | SW8270C | 5.8 µg/L | 4.5 µg/L | 25.2% |
| Phenol | SW8270C | 22 µg/L | ND (20 µg/L) | DL |
| Pyrene | SW8270C | 0.58 µg/L | 0.38 µg/L | 41.7% +/-RL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD values for multiple analytes exceeded the data validation limit of 30%, which was evidence of poor precision. These analyte results were qualified as J for samples OW-58A and DUP 9-20-22.

The RPD value for TPH DRO greatly exceeded the data validation limit of 30% at 113.7%. The reported results for TPH DRO were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for TPH DRO in the associated samples due to evidence of extremely poor precision (RPD > 100%).

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| EBL | Flagged as estimated by the laboratory. |
| ERPD-FD | High field duplicate RPD. |
| HT-EX | Sample was extracted outside of the method holding time. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | OW-58A | 2209A41-004a | 780 | 20 | µg/L | J | ERPD-FD |
| 1,2,4-Trimethylbenzene | SW8260B | DUP 9-20-22 | 2209A41-012a | 520 | 50 | µg/L | J | ERPD-FD |
| 1,2,4-Trimethylbenzene | SW8260B | OW-58 | 2209A41-005a | 8.6 | 50 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | OW-58A | 2209A41-004a | 210 | 20 | µg/L | J | ERPD-FD |
| 1,3,5-Trimethylbenzene | SW8260B | DUP 9-20-22 | 2209A41-012a | 140 | 50 | µg/L | J | ERPD-FD |
| 1,4-Dioxane | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 1.0 | µg/L | UJ | LR-SUR |
| 1,4-Dioxane | SW8270C | OW-60 | 2209a41-008c | 0.26 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-68 | 2209A41-009C | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-67 | 2209A41-010C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-68 | 2209A41-009C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-67 | 2209A41-010C | ND | 10 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 2,4-Dimethylphenol | SW8270C | OW-58A | 2209A41-004C | 6.5 | 10 | µg/L | J | MDLRL |
| 2,4-Dimethylphenol | SW8270C | DUP 9-20-22 | 2209A41-012C | 7.7 | 10 | µg/L | J | MDLRL |
| 2,4-Dinitrophenol | SW8270C | OW-68 | 2209A41-009C | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-67 | 2209A41-010C | ND | 20 | µg/L | R | LR-SUR |
| 2-Methylnaphthalene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-68 | 2209A41-009C | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-67 | 2209A41-010C | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | DUP 9-20-22 | 2209A41-012C | 8.5 | 10 | µg/L | J | MDLRL |
| 3,4-Methylphenol | SW8270C | OW-68 | 2209A41-009C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-67 | 2209A41-010C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-58A | 2209A41-004C | 5.4 | 10 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Acenaphthene | SW8270C | OW-64 | 2209a41-006c | 0.16 | 0.30 | µg/L | J | MDLRL |
| Acetone | SW8260B | FB 9-20-22 | 2209A41-011a | 11 | 10 | µg/L | JB | TBD |
| Acetone | SW8260B | Trip Blank | 2209A41-013a | 6.8 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-09-20-22 | 2209A41-001a | 7.0 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-64 | 2209A41-006a | 9.0 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | STP-1-NW | 2209A41-007a | 7.1 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-60 | 2209A41-008a | 5.0 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | OW-68 | 2209A41-009a | 7.2 | 10 | µg/L | U | MDLRL, TBD |
| Anthracene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Anthracene | SW8270C | OW-58A | 2209a41-004c | 0.66 | 0.30 | µg/L | J | ERPD-FD |
| Anthracene | SW8270C | DUP 9-20-22 | 2209a41-012c | 0.48 | 0.30 | µg/L | J | ERPD-FD |
| Anthracene | SW8270C | OW-64 | 2209a41-006c | 0.24 | 0.30 | µg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Benzo(a)anthracene | SW8270C | OW-58A | 2209a41-004c | 0.2 | 0.30 | µg/L | J | MDLRL |
| Benzo(b)fluoranthene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Benzoic Acid | SW8270C | OW-68 | 2209A41-009C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-67 | 2209A41-010C | ND | 20 | µg/L | R | LR-SUR |
| Beryllium, Total | E 200.7 | OW-60 | 2209A41-008D | 0.0012 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | OW-68 | 2209A41-009D | 0.0011 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | OW-67 | 2209A41-010D | 0.0014 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | OW-60 | 2209A41-008E | 0.0046 | 0.0060 | mg/L | U | EBD, MDLRL |
| Chromium, Dissolved | E 200.7 | EB-09-20-22 | 2209A41-001E | 0.0023 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-58A | 2209A41-004D | 0.0045 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP 9-20-22 | 2209A41-012D | 0.0037 | 0.0060 | mg/L | J | MDLRL |
| Chrysene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Fluoranthene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Fluoranthene | SW8270C | OW-58 | 2209a41-005c | 0.2 | 0.30 | µg/L | J | MDLRL |
| Fluorene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Fluorene | SW8270C | OW-68 | 2209a41-009c | 0.18 | 0.30 | µg/L | J | MDLRL |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| Isopropylbenzene | SW8260B | OW-58 | 2209A41-005a | 28 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-64 | 2209A41-006E | 0.000065 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-63 | 2209A41-003D | 0.000087 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-58 | 2209A41-005D | 0.00020 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-64 | 2209A41-006D | 0.00039 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-58 | 2209A41-005E | 0.00016 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-64 | 2209A41-006E | 0.00017 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-64 | 2209A41-006D | 0.00016 | 0.00020 | mg/L | J | MDLRL |
| MTBE | SW8260B | OW-68 | 2209A41-009a | 0.60 | 1.0 | µg/L | J | MDLRL |
| Naphthalene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30 | µg/L | UJ | LR-SUR |
| n-Butylbenzene | SW8260B | OW-58A | 2209A41-004a | 19 | 60 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-58 | 2209A41-005a | 14 | 150 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| n-Butylbenzene | SW8260B | OW-68 | 2209A41-009a | 0.66 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP 9-20-22 | 2209A41-012a | 19 | 150 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-60 | 2209A41-008E | 0.0038 | 0.01 | mg/L | J | MDLRL |
| Phenanthrene | SW8270C | EB-09-20-22 | 2209a41-001c | ND | 0.30. | µg/L | UJ | LR-SUR |
| Phenol | SW8270C | OW-68 | 2209A41-009C | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-67 | 2209A41-010C | ND | 20 | µg/L | R | LR-SUR |
| p-Isopropyltoluene | SW8260B | OW-58A | 2209A41-004a | 13 | 20 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | OW-68 | 2209A41-009a | 0.24 | 10 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | DUP 9-20-22 | 2209A41-012a | 12 | 50 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-09-20-22 | 2209a41-001c | 0.34 | 1.0 | µg/L | J- | LR-SUR, MDLRL |
| Pyrene | SW8270C | OW-58A | 2209a41-004c | 0.58 | 1.0 | µg/L | U | EBD, MDLRL |
| Pyrene | SW8270C | OW-64 | 2209a41-006c | 0.36 | 1.0 | µg/L | U | EBD, MDLRL |
| Pyrene | SW8270C | DUP 9-20-22 | 2209a41-012c | 0.38 | 1.0 | µg/L | U | EBD, MDLRL |
| sec-Butylbenzene | SW8260B | OW-58A | 2209A41-004a | 16 | 20 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-68 | 2209A41-009a | 0.60 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | DUP 9-20-22 | 2209A41-012a | 14 | 50 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-58A | 2209A41-004E | 0.00042 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-58 | 2209A41-005E | 0.00044 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-67 | 2209A41-010E | 0.00095 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-58A | 2209A41-004D | 0.00081 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP 9-20-22 | 2209A41-012D | 0.0007 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-63 | 2209A41-003E | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-58 | 2209A41-005E | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | STP-1-NW | 2209A41-007E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-60 | 2209A41-008E | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP 9-20-22 | 2209A41-012E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-58A | 2209A41-004a | 6300 | 200 | µg/L | J | ERPD-FD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------------|
| Toluene | SW8260B | DUP 9-20-22 | 2209A41-012a | 4600 | 50 | µg/L | J | ERPD-FD |
| Toluene | SW8260B | OW-63 | 2209A41-003a | 43 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-58 | 2209A41-005a | 42 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-64 | 2209A41-006a | 0.71 | 1.0 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-68 | 2209A41-009a | 0.80 | 1.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-63 | 2209A41-003C | 2.8 | 0.064 | mg/L | J | EBL, ERPD-FD |
| TPH DRO | SW8015 | OW-58A | 2209A41-004C | 16 | 0.32 | mg/L | J | EBL, ERPD-FD |
| TPH DRO | SW8015 | OW-58 | 2209A41-005C | 7.3 | 0.13 | mg/L | J | EBL, ERPD-FD |
| TPH DRO | SW8015 | OW-64 | 2209A41-006C | 0.57 | 0.064 | mg/L | J | EBL, ERPD-FD |
| TPH DRO | SW8015 | OW-68 | 2209A41-009C | 1.5 | 0.064 | mg/L | J+ | EBL, ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | OW-67 | 2209A41-010C | 0.73 | 0.064 | mg/L | J+ | EBL, ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | DUP 9-20-22 | 2209A41-012C | 4.4 | 0.64 | mg/L | J+ | EBL, ERPD-FD, HR-LCS |
| TPH DRO | SW8015 | STP-1-NW | 2209A41-007C | 0.16 | 0.064 | mg/L | JB | EBL, ERPD-FD, MBD |
| TPH DRO | SW8015 | OW-60 | 2209A41-008C | 0.097 | 0.064 | mg/L | JB | EBL, ERPD-FD, MBD |
| TPH DRO | SW8015 | EB-09-20-22 | 2209A41-001C | 0.027 | 0.064 | mg/L | U | EBL, ERPD-FD, MBD, MDLRL |
| TPH GRO | SW8015 | OW-58A | 2209a41-004a | 58 | 1.0 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-64 | 2209a41-006a | 0.52 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-68 | 2209a41-009a | 0.84 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-67 | 2209a41-010a | 0.12 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | EB-09-20-22 | 2209A41-001C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-63 | 2209A41-003C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-58A | 2209A41-004C | ND | 0.40 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-58 | 2209A41-005C | ND | 0.16 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-64 | 2209A41-006C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | STP-1-NW | 2209A41-007C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-60 | 2209A41-008C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-67 | 2209A41-010C | ND | 0.08 | mg/L | UJ | EBL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| TPH ORO | SW8015 | DUP 9-20-22 | 2209A41-012C | ND | 0.80 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | OW-68 | 2209A41-009C | 0.076 | 0.080 | mg/L | J+ | EBL, HR-LCS, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-63 | 2209A41-003E | 0.0045 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-58A | 2209A41-004E | 0.0059 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-58 | 2209A41-005E | 0.005 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-64 | 2209A41-006E | 0.0074 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1-NW | 2209A41-007E | 0.039 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-60 | 2209A41-008E | 0.013 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-68 | 2209A41-009E | 0.016 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-67 | 2209A41-010E | 0.0068 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 9-20-22 | 2209A41-012E | 0.0045 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-09-20-22 | 2209A41-001E | 0.0022 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58A | 2209A41-004D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58 | 2209A41-005D | 0.0045 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-64 | 2209A41-006D | 0.0068 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | STP-1-NW | 2209A41-007D | 0.033 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-60 | 2209A41-008D | 0.042 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-68 | 2209A41-009D | 0.031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-67 | 2209A41-010D | 0.030 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP 9-20-22 | 2209A41-012D | 0.020 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-58A | 2209A41-004a | 4,300 | 30 | µg/L | J | ERPD-FD |
| Xylenes, Total | SW8260B | DUP 9-20-22 | 2209A41-012a | 3,100 | 75 | µg/L | J | ERPD-FD |
| Zinc, Dissolved | E 200.7 | OW-63 | 2209A41-003E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-58A | 2209A41-004E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-64 | 2209A41-006E | 0.038 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | STP-1-NW | 2209A41-007E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-60 | 2209A41-008E | 0.011 | 0.010 | mg/L | JB | EBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | OW-68 | 2209A41-009E | 0.036 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-67 | 2209A41-010E | 0.035 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-58 | 2209A41-005E | 0.0059 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP 9-20-22 | 2209A41-012E | 0.0099 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-09-20-22 | 2209A41-001E | 0.0066 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Q3 GW Sampling | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task 0006 | Sample Start Date: 09/27/2022 |
| Date Validated: 12/02/2022 | Sample End Date: 09/27/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270 with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Modified Method 8015D ▪ Total and Dissolved Metals by EPA Methods 200.7 and 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209E92 | |
| Data Validator: Kyle Power, Environmental Chemist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blank
- Field blank
- Equipment blank

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-27-22 | 2209E92-001 |
| OW-1 | 2209E92-002 |
| BW-4B | 2209E92-003 |
| BW-5C | 2209E92-004 |
| BW-5B | 2209E92-005 |
| MKTF-44 | 2209E92-006 |
| MKTF-43 | 2209E92-007 |
| OW-10 | 2209E92-008 |
| MKTF-32 | 2209E92-009 |
| MKTF-41 | 2209E92-010 |
| DUP-9-27-22 | 2209E92-011 |
| FB 9-27-22 | 2209E92-012 |
| Trip Blank | 2209E92-013 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Calibration Ranges (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- ✓ Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicate (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 900 data points. The data completeness calculation does not include any submitted blank sample results. Six data points were rejected. The data completeness measure for this data package is calculated to be 99.33% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | No |
| <p>Comments: The laboratory noted the following non-conformances regarding the analytical data.</p> <p>"S" flagged surrogate/spikes denote that the analyte recovery was outside of the standard limits.</p> <p><u>Method 8270C</u>: 1,4-Dioxane is "E" flagged for sample MKTF-32 because the result was slightly above the calibration range.</p> <p><u>Method 8015D (DRO)</u>: The LCS had slightly elevated recovery. The LCSD had acceptable recoveries.</p> | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No |
| <p>Comments: The laboratory used the following data qualification flags with this data set.</p> <p>E – Estimated value. The 1,4-dioxane result for sample MKTF-32 with this laboratory flag was qualified as J to indicate an estimated concentration.</p> <p>J – Analyte detected below quantitation limits</p> <p>R – RPD outside of range</p> <p>S – % Recovery outside of range due to dilution or matrix interference.</p> <p>* – Value exceeds maximum contaminant level.</p> | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| <p>Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present or required since the samples were delivered to the laboratory by courier, and custody was maintained at all times.</p> | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| <p>Comments: The detection limits appeared to be acceptable. The following dilutions were applied.</p> <p><u>Method 8260B</u>: A dilution of 10 times was applied for the methyl tert-butyl ether (MTBE) analysis of sample MKTF-32.</p> <p><u>Method 200.7</u>: A dilution of 5 times was applied for the total metals analyses of sample MKTF-43.</p> <p><u>Method 200.8</u>: Dilutions of 5 times were applied for the total and dissolved metals analysis of select samples.</p> | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of 4°C ± 2°C between 1.0°C and 3.9°C as noted on the <i>Sample Log-In Check List</i> and CoC. The cooler temperature below 2°C was judged as acceptable since the samples were not reported to be frozen upon receipt at the laboratory, and the sample containers were reported to be intact.</p> | |



| VALIDATION CRITERIA CHECKLIST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|--------|------------------|-------|------------------|-------|--------------|-------|--------------|-------|------------------|--------|--------------|-------|------------------|--------|--------------|-------|--------------|-------|--------------|-------|------------------|--------|--------------|-------|--------------------|--------|------|-------|--------------------|--------|--------------|-------|---------------|-------|---------|-------|-----|-------|--------------|-------|-----------------|-------|--------------|-------|---------|--------|--------------|-------|-----|--------|--------------|
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Initial and continuing calibration data were not included as part of this data set. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.
<u>Modified Method 8015D</u> : The analyte TPH DRO was detected in the method blank from batch 70480 at 0.043 mg/L. Detections of TPH DRO in the associated samples that were less than the reporting limits were qualified as U. Results greater than the blank detection but less than 10 times the blank concentration were qualified as JB.
TPH-DRO was detected in sample MKTF-41 at a concentration greater than 10 times the blank detection and did not require qualification. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Method</th> <th>Analytes</th> <th>Batch</th> <th>MS Sample Source</th> </tr> </thead> <tbody> <tr> <td>200.7</td> <td>Total Metals</td> <td>70455</td> <td>Not Prepared</td> </tr> <tr> <td>200.7</td> <td>Dissolved Metals</td> <td>A91551</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Dissolved Metals</td> <td>A91411</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Total Metals</td> <td>70455</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Dissolved Metals</td> <td>B91411</td> <td>Not Prepared</td> </tr> <tr> <td>200.8</td> <td>Dissolved Selenium</td> <td>B91488</td> <td>OW-1</td> </tr> <tr> <td>200.8</td> <td>Dissolved Selenium</td> <td>A91522</td> <td>Not Prepared</td> </tr> <tr> <td>245.1</td> <td>Total Mercury</td> <td>70473</td> <td>MKTF-41</td> </tr> <tr> <td>504.1</td> <td>EDB</td> <td>70493</td> <td>Not Prepared</td> </tr> <tr> <td>8015D</td> <td>TPH DRO and MRO</td> <td>70480</td> <td>Not Prepared</td> </tr> <tr> <td>8015D</td> <td>TPH GRO</td> <td>A91419</td> <td>Not Prepared</td> </tr> <tr> <td>8260B</td> <td>VOC</td> <td>B91469</td> <td>Not Prepared</td> </tr> </tbody> </table> | | Method | Analytes | Batch | MS Sample Source | 200.7 | Total Metals | 70455 | Not Prepared | 200.7 | Dissolved Metals | A91551 | Not Prepared | 200.8 | Dissolved Metals | A91411 | Not Prepared | 200.8 | Total Metals | 70455 | Not Prepared | 200.8 | Dissolved Metals | B91411 | Not Prepared | 200.8 | Dissolved Selenium | B91488 | OW-1 | 200.8 | Dissolved Selenium | A91522 | Not Prepared | 245.1 | Total Mercury | 70473 | MKTF-41 | 504.1 | EDB | 70493 | Not Prepared | 8015D | TPH DRO and MRO | 70480 | Not Prepared | 8015D | TPH GRO | A91419 | Not Prepared | 8260B | VOC | B91469 | Not Prepared |
| Method | Analytes | Batch | MS Sample Source | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Total Metals | 70455 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | Dissolved Metals | A91551 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Metals | A91411 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Total Metals | 70455 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Metals | B91411 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Selenium | B91488 | OW-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.8 | Dissolved Selenium | A91522 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 245.1 | Total Mercury | 70473 | MKTF-41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 504.1 | EDB | 70493 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8015D | TPH DRO and MRO | 70480 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8015D | TPH GRO | A91419 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8260B | VOC | B91469 | Not Prepared | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|-------------------------|-----------|------------------|
| 8260B | Methyl tert-Butyl Ether | A91498 | Not Prepared |
| 8270C | SVOC | 70506 | Not Prepared |
| 8270 SIM | SVOC | 70506 | Not Prepared |
| 4500 CN E | Cyanide | WG1935264 | BW-4B |
| 4500 CN E | Cyanide | WG1935876 | Not Associated |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

Recoveries and RPDs for MS/MSDs prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the exceptions listed in the following table.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|----------|------------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Cadmium, Total | 70455 | 133% | ----- | 70-130% | ----- | ----- |
| 200.7 | Nickel, Total | 70455 | 69.1% | ----- | 70-130% | ----- | ----- |
| 200.7 | Beryllium, Dissolved | A91551 | 64.9% | ----- | 70-130% | ----- | ----- |
| 200.8 | Selenium, Dissolved | B91488 | 59.6% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70480 | 90.9% | Acceptable | 31.7-75.4% | 20.7% | 20% |
| 8270 SIM | 1,4-Dioxane | 70506 | Acceptable | Acceptable | 15-60.5% | 30.1% | 29.7% |
| 8270 SIM | Naphthalene | 70506 | Acceptable | Acceptable | 15-78.3% | 41.6% | 31.7% |
| 8270 SIM | 1-Methylnaphthalene | 70506 | Acceptable | Acceptable | 15-79.6% | 43.1% | 31.4% |
| 8270 SIM | 2-Methylnaphthalene | 70506 | Acceptable | Acceptable | 15-78.6% | 44.0% | 30.5% |
| 8270 SIM | Acenaphthene | 70506 | Acceptable | Acceptable | 15-92% | 38.0% | 30.5% |
| 8270 SIM | Phenanthrene | 70506 | Acceptable | Acceptable | 21-103% | 31.9% | 26.4% |
| 8270 SIM | Anthracene | 70506 | Acceptable | Acceptable | 21.1-106% | 31.8% | 14.4% |
| 8270 SIM | Fluoranthene | 70506 | Acceptable | Acceptable | 32.8-119% | 29.5% | 14.8% |
| 8270 SIM | Pyrene | 70506 | Acceptable | Acceptable | 34.1-110% | 27.8% | 19.2% |
| 8270 SIM | Chrysene | 70506 | Acceptable | Acceptable | 31.3-112% | 26.3% | 19% |
| 8270 SIM | Indeno(1,2,3-cd)pyrene | 70506 | Acceptable | Acceptable | 24.7-152% | 30.4% | 21.3% |

TPH DRO was detected in the associated samples, and the results were qualified as J+ due to evidence of high bias. Qualification was not required for total cadmium based on evidence of potential high bias as it was not detected in the associated samples.



VALIDATION CRITERIA CHECKLIST

Results for total nickel, dissolved barium, and dissolved selenium were qualified as J- if detected and UJ if not detected in the associated samples due to possible low bias.

Analytes with LCS/LCSD RPD values exceeding laboratory QC limits were qualified as J if detected and UJ if not detected in the associated samples due to poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the exceptions listed in the following table.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|---------|--------------------|-----------|
| 8270C | 2-Fluorophenol | MKTF-43 | 1.82% | 15-84.5% |
| 8270C | Phenol-d ₅ | MKTF-43 | 5.85% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | MKTF-43 | 2.98% | 15-108% |

Since Methods 8270C and 8270 SIM surrogate associations were not available from the laboratory, qualification was assigned to all the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. **This condition existed for the sample MKTF-43 for the acid surrogate, and associated analytes were qualified as R to indicate rejected data due to evidence of extremely low bias (recoveries less than 10%).**

Qualification was not required based on surrogate nonconformance in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-27-22, and one equipment blank sample, EB-09-27-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples, with the exceptions listed in the following table.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|----------------|---------------|
| FB 9-27-22 | 8260B | 2-Butanone | 7.5 µg/L |
| EB-09-27-22 | 200.7 | Dissolved Zinc | 0.0077 mg/L |
| EB-09-27-22 | 8015D | TPH DRO | 0.022 mg/L |

Dissolved zinc was detected in the associated samples greater than the reporting limits but less than 10 times the blank result and was assigned JB qualifiers. Qualification was not required for 2-butanone as it was not detected in the associated samples.

The TPH DRO results were previously qualified due to laboratory blank contamination in batch 70480; therefore, additional qualification due to the equipment blank detection was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples. Sample DUP-9-27-22 was collected as a field duplicate of sample OW-1.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for dissolved zinc greatly exceeded the data validation QC limit for samples OW-1 and DUP-9-27-22 at 105.1%. Dissolved zinc was qualified as J for the parent, field duplicate, and associated samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? Yes

Comments: Laboratory duplicates prepared for these analyses and laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500 CN E | Cyanide | WG1935264 | EB-09-27-22 and OW-1 |
| 4500CN E | Cyanide | WG1935876 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

Laboratory duplicate RPDs were within laboratory QC limits.

The RPD values for laboratory duplicate samples prepared from non-project samples were considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-43 | Antimony | ND | 0.004 |
| MKTF-44 | Antimony | ND | 0.0007 |
| MKTF-41 | Arsenic | 0.0017 | 0.0019 |
| OW-10 | Arsenic | 0.00051 | 0.00058 |
| OW-10 | Barium | 0.048 | 0.049 |
| OW-10 | Lead | 0.000088 | 0.0001 |
| BW-4B | Nickel | 0.0069 | 0.016 |
| MKTF-32 | Nickel | ND | 0.0033 |
| MKTF-43 | Nickel | ND | 0.027 |
| BW-5B | Selenium | 0.00057 | 0.00081 |
| DUP-9-27-22 | Selenium | 0.0024 | 0.0025 |
| OW-1 | Selenium | 0.002 | 0.0025 |



VALIDATION CRITERIA CHECKLIST

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| BW-5C | Silver | ND | 0.0022 |
| MKTF-43 | Silver | 0.031 | 0.039 |
| OW-10 | Silver | ND | 0.0023 |
| MKTF-43 | Vanadium | ND | 0.0081 |
| DUP-9-27-22 | Zinc | ND | 0.014 |
| EB-09-27-22 | Zinc | ND | 0.0077 |
| MKTF-32 | Zinc | ND | 0.014 |
| MKTF-41 | Zinc | ND | 0.016 |
| MKTF-43 | Zinc | ND | 0.016 |
| OW-1 | Zinc | ND | 0.045 |
| OW-10 | Zinc | ND | 0.066 |

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-1
Field Duplicate Sample ID: DUP-9-27-22 | | | | |
|---|--------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| MTBE | 8260B | 2.7 µg/L | 3.0 µg/L | 10.5% |
| TPH DRO | 8015D | 0.031 mg/L | 0.045 mg/L | 36.8% +/-RL |
| Bis(2-ethylhexyl)phthalate | 8270C | 9.0 µg/L | ND (10 µg/L) | DL |
| Di-n-butyl phthalate | 8270C | 18 µg/L | ND (10 µg/L) | DL |
| 1,4-Dioxane | 8270 SIM | ND (1.0 µg/L) | 0.28 µg/L | DL |
| Pyrene | 8270 SIM | 0.32 µg/L | ND (1.0 µg/L) | DL |
| Barium, Dissolved | 200.7 | 0.041 mg/L | 0.041 mg/L | 0.0% |
| Barium, Total | 200.7 | 0.041 mg/L | 0.043 mg/L | 4.8% |
| Vanadium, Dissolved | 200.7 | 0.036 mg/L | 0.037 mg/L | 2.7% +/-RL |
| Vanadium, Total | 200.7 | 0.041 mg/L | 0.042 mg/L | 2.4% +/-RL |
| Zinc, Dissolved | 200.7 | 0.045 mg/L | 0.014 mg/L | 105.1% |
| Arsenic, Dissolved | 200.8 | 0.00060 mg/L | 0.00064 mg/L | 6.5% +/-RL |
| Arsenic, Total | 200.8 | 0.00065 mg/L | 0.00065 mg/L | 0.0% +/-RL |
| Lead, Total | 200.8 | 0.00014 mg/L | 0.00014 mg/L | 0.0% +/-RL |
| Selenium, Dissolved | 200.8 | 0.0025 mg/L | 0.0025 mg/L | 0.0% |
| Selenium, Total | 200.8 | 0.0020 mg/L | 0.0024 mg/L | 18.2% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for dissolved zinc greatly exceeded the data validation QC limit and the results were qualified as J for the associated samples due to evidence of poor precision.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| ECAL | The result exceeds the calibration range. |
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | BW-5C | 2209e92-004a | 0.76 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | BW-5B | 2209e92-005a | 0.42 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | OW-10 | 2209e92-008a | 0.55 | 1 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | OW-10 | 2209e92-008a | 0.43 | 1 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | MKTF-41 | 2209e92-010a | 0.17 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | BW-5C | 2209e92-004a | 0.59 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | BW-5B | 2209e92-005a | 0.37 | 1 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-10 | 2209e92-008a | 0.37 | 1 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-32 | 2209e92-009c | 27 | 1 | µg/L | J | ECAL, ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-5C | 2209e92-004c | 3.5 | 1 | µg/L | J | ERPD-LCS |
| 1,4-Dioxane | SW8270C | OW-10 | 2209e92-008c | 1 | 1 | µg/L | J | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-41 | 2209e92-010c | 1.9 | 1 | µg/L | J | ERPD-LCS |
| 1,4-Dioxane | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 1 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | OW-1 | 2209e92-002c | ND | 1 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-4B | 2209e92-003c | ND | 1 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-44 | 2209e92-006c | ND | 1 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MKTF-43 | 2209E92-007C | ND | 1 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-5B | 2209e92-005c | 0.96 | 1 | µg/L | J | ERPD-LCS, MDLRL |
| 1,4-Dioxane | SW8270C | DUP-9-27-22 | 2209e92-011c | 0.28 | 1 | µg/L | J | ERPD-LCS, MDLRL |
| 1-Methylnaphthalene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 20 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | FB 9-27-22 | 2209e92-012a | 7.5 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 2-Methylnaphthalene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| 2-Methylphenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 10 | µg/L | R | LR-SUR |
| Acenaphthene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Acetone | SW8260B | BW-5B | 2209e92-005a | 4.3 | 10 | µg/L | J | MDLRL |
| Anthracene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| Anthracene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | OW-10 | 2209E92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | MKTF-32 | 2209E92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | MKTF-41 | 2209E92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | DUP-9-27-22 | 2209E92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Antimony, Dissolved | E200.8 | MKTF-44 | 2209E92-006E | 0.0007 | 0.001 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-43 | 2209E92-007E | 0.004 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-1 | 2209E92-002E | 0.0006 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5C | 2209E92-004E | 0.00031 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-5B | 2209E92-005E | 0.00085 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-43 | 2209E92-007E | 0.0026 | 0.005 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-10 | 2209E92-008E | 0.00058 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-9-27-22 | 2209E92-011E | 0.00064 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-1 | 2209E92-002D | 0.00065 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-5B | 2209E92-005D | 0.00094 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-10 | 2209E92-008D | 0.00051 | 0.001 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-9-27-22 | 2209E92-011D | 0.00065 | 0.001 | mg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-32 | 2209E92-009a | 0.35 | 1 | µg/L | J | MDLRL |
| Benzene | SW8260B | MKTF-41 | 2209E92-010a | 0.4 | 1 | µg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | EB-09-27-22 | 2209E92-001E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | OW-1 | 2209E92-002E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-4B | 2209E92-003E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-5C | 2209E92-004E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-5B | 2209E92-005E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MKTF-44 | 2209E92-006E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MKTF-43 | 2209E92-007E | ND | 0.002 | mg/L | UJ | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Beryllium, Dissolved | E 200.7 | OW-10 | 2209E92-008E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MKTF-32 | 2209E92-009E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MKTF-41 | 2209E92-010E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | DUP-9-27-22 | 2209E92-011E | ND | 0.002 | mg/L | UJ | LR-LCS |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-1 | 2209E92-002C | 9 | 10 | µg/L | J | MDLRL |
| Chrysene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Chrysene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Cobalt, Total | E 200.7 | OW-10 | 2209E92-008D | 0.0042 | 0.006 | mg/L | J | MDLRL |
| Fluoranthene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|-----------------|
| Fluoranthene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | MKTF-44 | 2209E92-006E | 0.00013 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-43 | 2209E92-007E | 0.00047 | 0.0025 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-10 | 2209E92-008E | 0.0001 | 0.0005 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-32 | 2209E92-009E | 0.000094 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-1 | 2209E92-002D | 0.00014 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | BW-5B | 2209E92-005D | 0.00021 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-43 | 2209E92-007D | 0.002 | 0.0025 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-10 | 2209E92-008D | 0.000088 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-9-27-22 | 2209E92-011D | 0.00014 | 0.0005 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Naphthalene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-41 | 2209e92-010c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Nickel, Dissolved | E 200.7 | MKTF-32 | 2209E92-009E | 0.0033 | 0.01 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | BW-5C | 2209E92-004D | 0.013 | 0.01 | mg/L | J- | LR-LCS |
| Nickel, Total | E 200.7 | EB-09-27-22 | 2209E92-001D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-1 | 2209E92-002D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | BW-5B | 2209E92-005D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-44 | 2209E92-006D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-43 | 2209E92-007D | ND | 0.05 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-10 | 2209E92-008D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-32 | 2209E92-009D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | MKTF-41 | 2209E92-010D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | DUP-9-27-22 | 2209E92-011D | ND | 0.01 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | BW-4B | 2209E92-003D | 0.0069 | 0.01 | mg/L | J- | LR-LCS, MDLRL |
| Phenanthrene | SW8270C | MKTF-41 | 2209e92-010c | 0.42 | 0.3 | µg/L | J | ERPD-LCS |
| Phenanthrene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | OW-1 | 2209e92-002c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | BW-4B | 2209e92-003c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | BW-5C | 2209e92-004c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | BW-5B | 2209e92-005c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | MKTF-44 | 2209e92-006c | ND | 0.3 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|-------|-------|--------------------|-----------------|
| Phenanthrene | SW8270C | MKTF-43 | 2209E92-007C | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | OW-10 | 2209e92-008c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | MKTF-32 | 2209e92-009c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 0.3 | µg/L | UJ | ERPD-LCS |
| Phenol | SW8270C | MKTF-43 | 2209E92-007C | ND | 20 | µg/L | R | LR-SUR |
| Pyrene | SW8270C | EB-09-27-22 | 2209e92-001c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | BW-4B | 2209e92-003c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | BW-5C | 2209e92-004c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | BW-5B | 2209e92-005c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-44 | 2209e92-006c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-43 | 2209E92-007C | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-10 | 2209e92-008c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-32 | 2209e92-009c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-41 | 2209e92-010c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-9-27-22 | 2209e92-011c | ND | 1 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-1 | 2209e92-002c | 0.32 | 1 | µg/L | J | ERPD-LCS, MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-32 | 2209e92-009a | 0.41 | 1 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OW-1 | 2209E92-002E | 0.0025 | 0.001 | mg/L | J- | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-44 | 2209E92-006E | 0.012 | 0.001 | mg/L | J- | LR-LCS |
| Selenium, Dissolved | E200.8 | BW-5C | 2209E92-004E | 0.00036 | 0.001 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | BW-5B | 2209E92-005E | 0.00081 | 0.001 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP-9-27-22 | 2209E92-011E | 0.0025 | 0.005 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | BW-4B | 2209E92-003D | 0.00046 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | BW-5B | 2209E92-005D | 0.00057 | 0.001 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-32 | 2209E92-009D | 0.00076 | 0.001 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | BW-5C | 2209E92-004E | 0.0022 | 0.005 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|------------------------------|
| Silver, Dissolved | E 200.7 | OW-10 | 2209E92-008E | 0.0023 | 0.005 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-41 | 2209E92-010C | 1.9 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | MKTF-43 | 2209E92-007C | 0.1 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | OW-10 | 2209E92-008C | 0.068 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-32 | 2209E92-009C | 0.21 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | EB-09-27-22 | 2209E92-001C | 0.039 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-1 | 2209E92-002C | 0.031 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | BW-4B | 2209E92-003C | 0.041 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | BW-5C | 2209E92-004C | 0.064 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | BW-5B | 2209E92-005C | 0.06 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-44 | 2209E92-006C | 0.048 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-27-22 | 2209E92-011C | 0.045 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | BW-5C | 2209e92-004a | 0.023 | 0.05 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | BW-5B | 2209e92-005a | 0.013 | 0.05 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | MKTF-41 | 2209e92-010a | 0.014 | 0.05 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | MKTF-41 | 2209E92-010C | 0.061 | 0.08 | mg/L | J | MDLRL |
| Trichloroethene | SW8260B | MKTF-32 | 2209e92-009a | 0.28 | 1 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-1 | 2209E92-002E | 0.036 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-4B | 2209E92-003E | 0.0094 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5B | 2209E92-005E | 0.007 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-43 | 2209E92-007E | 0.0081 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-10 | 2209E92-008E | 0.0055 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-32 | 2209E92-009E | 0.0042 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-41 | 2209E92-010E | 0.024 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-9-27-22 | 2209E92-011E | 0.037 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-1 | 2209E92-002D | 0.041 | 0.05 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Total | E 200.7 | BW-5C | 2209E92-004D | 0.036 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-5B | 2209E92-005D | 0.013 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-10 | 2209E92-008D | 0.0072 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-32 | 2209E92-009D | 0.012 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-41 | 2209E92-010D | 0.024 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-9-27-22 | 2209E92-011D | 0.042 | 0.05 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | MKTF-41 | 2209e92-010a | 0.8 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | EB-09-27-22 | 2209E92-001E | 0.0077 | 0.01 | mg/L | J | ERPD-FD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-1 | 2209E92-002E | 0.045 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | BW-4B | 2209E92-003E | 0.014 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | BW-5C | 2209E92-004E | 0.036 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | BW-5B | 2209E92-005E | 0.048 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | MKTF-44 | 2209E92-006E | 0.014 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | MKTF-43 | 2209E92-007E | 0.016 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | OW-10 | 2209E92-008E | 0.066 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | MKTF-32 | 2209E92-009E | 0.014 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | MKTF-41 | 2209E92-010E | 0.016 | 0.01 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | DUP-9-27-22 | 2209E92-011E | 0.014 | 0.01 | mg/L | JB | EBD, ERPD-FD |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0004 | Sample Start Date: 09/28/2022 |
| Date Validated: 01/30/2023 | Sample End Date: 09/28/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209F93 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-28-22 | 2209F93-001 |
| BW-1C | 2209F93-002 |
| BW-2C | 2209F93-003 |
| BW-2B | 2209F93-004 |
| BW-3C | 2209F93-005 |
| BW-3B | 2209F93-006 |
| DUP-9-28-22 | 2209F93-007 |
| FB 9-28-22 | 2209F93-008 |
| Trip Blank | 2209F93-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | No |
| Comments: The laboratory noted the following analytical non-conformance related to this data set.
<u>Method 8270C SIM</u> : The method blank had a low surrogate recovery for 2,4,6-tribromophenol. | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No |
| Comments: The laboratory used the following data qualification flags with this data set.
J – Analyte detected below quantitation limits.
R – % RPD outside of range.
S – % Recovery outside of range due to dilution or matrix interference. | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers. | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| Comments: The detection limits appeared to be acceptable. The following dilution was applied.
<u>Method 200.8</u> : Sample EB-09-28-22 was diluted by a factor of 5 times for the analysis of dissolved antimony. | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.
The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.
The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement. | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of 4°C ± 2°C at 0.2°C, 0.3°C, and 3.3°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 3.1°C as noted on the CoC. The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen. | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |



VALIDATION CRITERIA CHECKLIST

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.

TPH DRO was detected in the laboratory blank for Method 8015D batch 70492 at a concentration of 0.019 mg/L. Sample results detected below or equal to the blank concentration and/or the laboratory reporting limit were qualified with a U flag. Non-detections of this analyte in the associated samples and results greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 70489 | Not Prepared |
| 200.7 | Dissolved Metals | B91551 | Not Prepared |
| 200.7 | Dissolved Metals | C91551 | DUP-9-28-22 |
| 200.8 | Total Metals | 70489 | EB-09-28-22 |
| 200.8 | Dissolved Metals | A91411 | DUP-9-28-22 |
| 200.8 | Dissolved Antimony | B91488 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 70626 | DUP-9-28-22 |
| 504.1 | EDB | 70493 | EB-09-28-22 |
| 504.1 | EDB | 70550 | Not Prepared |
| 4500CN E | Cyanide | WG1935876 | BW-1C |
| 8015D | TPH DRO and MRO | 70492 | Not Prepared |
| 8015D | TPH GRO | A91437 | EB-09-28-22 |
| 8260B | VOCs | B91553 | FB 9-28-22 |
| 8260B | VOCs | R91553 | Not Prepared |
| 8270C SIM | SVOCs | 70506 | Not Prepared |
| 8270C | SVOCs | 70506 | Not Prepared |
| 8270C SIM | SVOCs | 70536 | Not Prepared |
| 8270C | SVOCs | 70536 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits, with the following exception.

The MS/MSD RPD for benzene in batch B91553 exceeded the QC limit of 20% at 20.5%. Benzene was not detected in the associated samples, and these results were qualified as UJ due to evidence of poor precision.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Cobalt | 70489 | 135% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Beryllium | B91551 | 61.9% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Beryllium | C91551 | 67.2% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Zinc | C91551 | 137% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 70489 | 149% | ----- | 70-130% | ----- | ----- |
| 8270C SIM | 1,4-Dioxane | 70506 | Acceptable | Acceptable | 15-60.5% | 30.1% | 29.7% |
| 8270C SIM | Naphthalene | 70506 | Acceptable | Acceptable | 15-78.3% | 41.6% | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 70506 | Acceptable | Acceptable | 15-79.6% | 43.1% | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 70506 | Acceptable | Acceptable | 15-78.6% | 44.0% | 30.5% |
| 8270C SIM | Acenaphthene | 70506 | Acceptable | Acceptable | 15-92% | 38.0% | 30.5% |
| 8270C SIM | Phenanthrene | 70506 | Acceptable | Acceptable | 21-103% | 31.9% | 26.4% |
| 8270C SIM | Anthracene | 70506 | Acceptable | Acceptable | 21.1-106% | 31.8% | 14.4% |
| 8270C SIM | Fluoranthene | 70506 | Acceptable | Acceptable | 32.8-119% | 29.5% | 14.8% |
| 8270C SIM | Pyrene | 70506 | Acceptable | Acceptable | 34.1-110% | 27.8% | 19.2% |
| 8270C SIM | Chrysene | 70506 | Acceptable | Acceptable | 31.3-112% | 26.3% | 19% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | 70506 | Acceptable | Acceptable | 24.7-152% | 30.4% | 21.3% |
| 8270C SIM | 1,4-Dioxane | 70536 | Acceptable | Acceptable | 15-60.5% | 55.1% | 29.7% |
| 8270C SIM | Naphthalene | 70536 | Acceptable | Acceptable | 15-78.3% | 38.6% | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 70536 | Acceptable | Acceptable | 15-79.6% | 35.9% | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 70536 | Acceptable | Acceptable | 15-78.6% | 31.9% | 30.5% |
| 8270C SIM | Acenaphthene | 70536 | Acceptable | Acceptable | 15-92% | 43.3% | 30.5% |
| 8270C SIM | Fluorene | 70536 | Acceptable | Acceptable | 15-96% | 29.4% | 25.1% |

Detections of total cobalt, dissolved zinc, and total selenium in the associated samples were qualified as J+ due to evidence of potential high bias. Non-detection of these analytes in the associated samples did not require qualification.

Dissolved beryllium was not detected in the associated samples and the results were assigned UJ qualifiers due to evidence of potential low bias,



VALIDATION CRITERIA CHECKLIST

The identified analytes with LCS/LCSD RPD values that exceeded the defined QC limits were not detected in the associated samples. These results were qualified as UJ due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-28-22, and one equipment blank sample, EB-09-28-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Acetone | 3.4 µg/L |
| FB 9-28-22 | 8260B | 2-Butanone | 16 µg/L |
| FB 9-28-22 | 8260B | Acetone | 4.8 µg/L |
| EB-9-28-22 | 8260B | Acetone | 12 µg/L |
| EB-9-28-22 | 8015D | TPH DRO | 0.019 mg/L |
| EB-9-28-22 | 200.7 | Dissolved Zinc | 0.0048 mg/L |

Detections of acetone in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections of acetone and dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples and results greater than 10 times the blank detection did not require qualification.

The TPH DRO results for the samples in batch 70492 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-28-22 was collected as a field duplicate of sample BW-1C.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1935876 from sample EB-09-28-22 and a sample not associated with this data set.

The sample EB-09-28-22 and the laboratory duplicate were both non-detect for cyanide, and an RPD could not be calculated.

The RPD value for the laboratory duplicate sample pair prepared from a non-project sample was evaluated and considered, but data were not qualified based on that result since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| BW-3C | Antimony | ND | 0.00057 |
| BW-3B | Antimony | ND | 0.0013 |
| DUP-9-28-22 | Antimony | ND | 0.00055 |
| BW-1C | Arsenic | 0.00015 | 0.00017 |
| DUP-9-28-22 | Arsenic | ND | 0.00015 |
| BW-1C | Nickel | ND | 0.0077 |
| BW-3C | Selenium | ND | 0.00067 |
| EB-09-28-22 | Zinc | ND | 0.0048 |
| BW-1C | Zinc | ND | 0.024 |
| BW-2C | Zinc | ND | 0.018 |
| BW-3C | Zinc | ND | 0.028 |
| BW-3B | Zinc | ND | 0.30 |
| DUP-9-28-22 | Zinc | ND | 0.026 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: BW-1C
Field Duplicate Sample ID: DUP-9-28-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.017 mg/L | 0.017 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.018 mg/L | 0.018 mg/L | 0.0% |
| Chromium, Total | E 200.7 | ND (0.0060 mg/L) | 0.0024 mg/L | DL |
| Nickel, Dissolved | E 200.7 | 0.0077 mg/L | ND (0.010 mg/L) | DL |
| Zinc, Dissolved | E 200.7 | 0.024 mg/L | 0.026 mg/L | 8.0% |
| Antimony, Dissolved | E200.8 | ND (0.0010 mg/L) | 0.00055 mg/L | DL |
| Arsenic, Dissolved | E200.8 | 0.00017 mg/L | 0.00015 mg/L | 12.5% +/-RL |
| Arsenic, Total | E200.8 | 0.00015 mg/L | ND (0.0010 mg/L) | DL |
| TPH DRO | SW8015 | 0.025 mg/L | 0.018 mg/L | 32.6% +/-RL |
| Acetone | SW8260B | 7.1 µg/L | 11 µg/L | 43.1% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| ERPD-MS | The MS/MSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-1C | 2209f93-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-2C | 2209f93-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-2B | 2209f93-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-3C | 2209f93-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | BW-3B | 2209f93-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-1C | 2209f93-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-2C | 2209f93-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-2B | 2209f93-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-3C | 2209f93-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | BW-3B | 2209f93-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2-Methylnaphthalene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-1C | 2209f93-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-2C | 2209f93-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-2B | 2209f93-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-3C | 2209f93-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | BW-3B | 2209f93-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-1C | 2209f93-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-2C | 2209f93-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-2B | 2209f93-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-3C | 2209f93-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | BW-3B | 2209f93-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acetone | SW8260B | EB-09-28-22 | 2209F93-001a | 12 | 10 | µg/L | JB | TBD |
| Acetone | SW8260B | DUP-9-28-22 | 2209F93-007a | 11 | 10 | µg/L | JB | TBD |
| Acetone | SW8260B | Trip Blank | 2209F93-009a | 3.4 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | BW-1C | 2209F93-002a | 7.1 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | BW-2B | 2209F93-004a | 3.8 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | FB 9-28-22 | 2209F93-008a | 4.8 | 10 | µg/L | U | MDLRL, TBD |
| Anthracene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Antimony, Dissolved | E200.8 | BW-3C | 2209F93-005E | 0.00057 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | DUP-9-28-22 | 2209F93-007E | 0.00055 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-1C | 2209F93-002E | 0.00017 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-2C | 2209F93-003E | 0.00080 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-2B | 2209F93-004E | 0.00053 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | BW-3C | 2209F93-005E | 0.00078 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | DUP-9-28-22 | 2209F93-007E | 0.00015 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-1C | 2209F93-002D | 0.00015 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-2B | 2209F93-004D | 0.00064 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | BW-3C | 2209F93-005D | 0.00085 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | FB 9-28-22 | 2209F93-008a | ND | 1.0 | µg/L | UJ | ERPD-MS |
| Benzene | SW8260B | Trip Blank | 2209F93-009a | ND | 1.0 | µg/L | UJ | ERPD-MS |
| Beryllium, Dissolved | E 200.7 | EB-09-28-22 | 2209F93-001E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-1C | 2209F93-002E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-2C | 2209F93-003E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-2B | 2209F93-004E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-3C | 2209F93-005E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | BW-3B | 2209F93-006E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | DUP-9-28-22 | 2209F93-007E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Chromium, Total | E 200.7 | BW-2B | 2209F93-004D | 0.0029 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | BW-3C | 2209F93-005D | 0.004 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-9-28-22 | 2209F93-007D | 0.0024 | 0.0060 | mg/L | J | MDLRL |
| Chrysene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Cobalt, Dissolved | E 200.7 | BW-3B | 2209F93-006E | 0.0025 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | BW-2B | 2209F93-004D | 0.0063 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | BW-3B | 2209F93-006D | 0.0042 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Fluoranthene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | BW-1C | 2209f93-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | BW-2C | 2209f93-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | BW-2B | 2209f93-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | BW-3C | 2209f93-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | BW-3B | 2209f93-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | BW-3C | 2209F93-005E | 0.000088 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | BW-3B | 2209F93-006E | 0.000070 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | BW-3C | 2209F93-005D | 0.00037 | 0.00050 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-1C | 2209f93-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-2C | 2209f93-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-2B | 2209f93-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-3C | 2209f93-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | BW-3B | 2209f93-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-9-28-22 | 2209f93-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Nickel, Dissolved | E 200.7 | BW-1C | 2209F93-002E | 0.0077 | 0.010 | mg/L | J | MDLRL |
| Phenanthrene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | EB-09-28-22 | 2209f93-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Selenium, Dissolved | E200.8 | BW-3C | 2209F93-005E | 0.00067 | 0.0010 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | EB-09-28-22 | 2209F93-001C | 0.019 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | BW-1C | 2209F93-002C | 0.025 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | BW-2B | 2209F93-004C | 0.049 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | BW-3B | 2209F93-006C | 0.021 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-28-22 | 2209F93-007C | 0.018 | 0.064 | mg/L | U | MBD, MDLRL |
| Vanadium, Total | E 200.7 | BW-2C | 2209F93-003D | 0.0056 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-3B | 2209F93-006D | 0.0046 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | BW-3B | 2209F93-006E | 0.30 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Dissolved | E 200.7 | BW-1C | 2209F93-002E | 0.024 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | BW-2C | 2209F93-003E | 0.018 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | BW-2B | 2209F93-004E | 0.043 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | BW-3C | 2209F93-005E | 0.028 | 0.010 | mg/L | JB | EBD, HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | DUP-9-28-22 | 2209F93-007E | 0.026 | 0.010 | mg/L | JB | EBD, HR-LCS |
| Zinc, Dissolved | E 200.7 | EB-09-28-22 | 2209F93-001E | 0.0048 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/29/2022 |
| Date Validated: 01/23/2023 | Sample End Date: 09/29/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209H02 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-29-22 | 2209H02-001 |
| MW-1 | 2209H02-002 |
| SMW-4 | 2209H02-003 |
| MW-2 | 2209H02-004 |
| MW-5 | 2209H02-005 |
| DUP-9-29-22 | 2209H02-006 |
| FB 9-29-22 | 2209H02-007 |
| Trip Blank | 2209H02-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 450 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? Yes

Comments: The laboratory did not report non-conformances related to the analytical data for this sample set.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|-----------|------------------|-----------------|
| 200.7 | MW-5 | Dissolved Metals | 5 |
| 245.1 | SMW-4 | Total Mercury | 5 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.6°C , 1.0°C , and 1.7°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 3.0°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.



VALIDATION CRITERIA CHECKLIST

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|------------|-------|---------------|
| 200.7 | Total Zinc | 70537 | 0.0055 mg/L |
| 8015D | TPH DRO | 70521 | 0.019 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 70537 | Not Prepared |
| 200.7 | Dissolved Metals | C91551 | Not Prepared |
| 200.8 | Total Metals | 70537 | Not Prepared |
| 200.8 | Dissolved Metals | A91522 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 70627 | SMW-4 |
| 504.1 | EDB | 70550 | Not Prepared |
| 4500CN E | Cyanide | WG1937600 | Not Associated |
| 8015D | TPH DRO and MRO | 70521 | Not Prepared |



VALIDATION CRITERIA CHECKLIST

| Method | Analytes | Batch | MS Sample Source |
|-----------|----------|---------|------------------|
| 8015D | TPH GRO | GW91584 | MW-1 |
| 8260B | VOCs | R91600 | MW-1 |
| 8270C SIM | SVOCs | 70536 | Not Prepared |
| 8270C | SVOCs | 70536 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exception.

The reported MS and MSD percent recoveries for mercury in Method 245.1 batch 70627 were outside the QC limits of 75-125% at 126%, 72.1%, and 74.7%. The results for all of the associated samples in the batch would typically be qualified based on the MS/MSD results. However, since conflicting results (low and high recoveries) were reported for this batch, the determination of which qualifier to be applied would be arbitrary. Therefore, only the non-detected dissolved mercury and total mercury results for the parent sample SMW-4 were qualified UJ due to these non-conformances.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Chromium | 70537 | 152% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Beryllium | C91551 | 67.2% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Zinc | C91551 | 137% | ----- | 70-130% | ----- | ----- |
| 8270C SIM | 1,4-Dioxane | 70536 | Acceptable | Acceptable | 15-60.5% | 55.1% | 29.7% |
| 8270C SIM | Naphthalene | 70536 | Acceptable | Acceptable | 15-78.3% | 38.6% | 31.7% |
| 8270C SIM | 1-Methynaphthalene | 70536 | Acceptable | Acceptable | 15-79.6% | 35.9% | 31.4% |
| 8270C SIM | 2-Methynaphthalene | 70536 | Acceptable | Acceptable | 15-78.6% | 31.9% | 30.5% |
| 8270C SIM | Acenaphthene | 70536 | Acceptable | Acceptable | 15-92% | 43.3% | 30.5% |
| 8270C SIM | Fluorene | 70536 | Acceptable | Acceptable | 15-96% | 29.4% | 25.1% |

Detections of total chromium and dissolved zinc were qualified as J+ due to the evidence of potential high bias.

The non-detection of total chromium in sample MW-5 did not require qualification.

Dissolved beryllium was not detected in the associated samples, and these results were qualified as UJ due to the evidence of potential low bias.

The identified analytes with LCS/LCSD RPD values that were above the QC limit were not detected in the associated samples. These results were qualified as UJ due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-29-22, and one equipment blank sample, EB-09-29-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Acetone | 3.2 µg/L |
| EB-09-29-22 | 8260B | Acetone | 5.4 µg/L |
| EB-09-29-22 | 8260B | Total Xylenes | 0.46 µg/L |
| EB-09-29-22 | 8015D | TPH DRO | 0.045 mg/L |
| EB-09-29-22 | 200.7 | Total Chromium | 0.0025 mg/L |
| EB-09-29-22 | 200.7 | Dissolved Zinc | 0.0072 mg/L |

Detections of acetone, total chromium, and dissolved zinc in the associated samples that were less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results for the samples in batch 70521 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-29-22 was collected as a field duplicate of sample MW-1.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for dissolved zinc greatly exceeded the data validation limit of 30% at 107.2%. The reported results for dissolved zinc were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for dissolved zinc in the associated samples due to evidence of extremely poor precision (RPD > 100%).

An RPD value could not be calculated for dissolved nickel for the field duplicate pair MW-1 and DUP-9-29-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, dissolved nickel was qualified as J for the parent sample MW-1 and UJ for the duplicate sample DUP-9-29-22.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1937600 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| Sample ID | Analyte | Total Result (mg/L) | Dissolved Result (mg/L) |
|-------------|---------|---------------------|-------------------------|
| MW-1 | Arsenic | 0.0013 | 0.0014 |
| MW-1 | Nickel | ND | 0.022 |
| EB-09-29-22 | Zinc | ND | 0.0072 |
| MW-1 | Zinc | 0.0047 | 0.096 |
| SMW-4 | Zinc | ND | 0.055 |
| MW-2 | Zinc | ND | 0.037 |
| MW-5 | Zinc | ND | 0.029 |
| DUP-9-29-22 | Zinc | ND | 0.029 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MW-1
Field Duplicate Sample ID: DUP-9-29-22 | | | | |
|--|----------------|-------------------|------------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.013 mg/L | 0.013 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.013 mg/L | 0.013 mg/L | 0.0% |
| Chromium, Total | E 200.7 | 0.0029 mg/L | 0.0033 mg/L | 12.9% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.022 mg/L | ND (0.010 mg/L) | DL |
| Zinc, Dissolved | E 200.7 | 0.096 mg/L | 0.029 mg/L | 107.2% |
| Zinc, Total | E 200.7 | 0.0047 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0014 mg/L | 0.0013 mg/L | 7.4% +/-RL |
| Arsenic, Total | E200.8 | 0.0013 mg/L | 0.0015 mg/L | 14.3% +/-RL |
| Lead, Dissolved | E200.8 | 0.00013 mg/L | 0.00012 mg/L | 8.0% +/-RL |
| Lead, Total | E200.8 | 0.00073 mg/L | 0.00066 mg/L | 10.1% +/-RL |
| TPH DRO | SW8015 | 0.017 mg/L | 0.030 mg/L | 55.3% +/-RL |
| Acetone | SW8260B | 3.3 µg/L | ND (10 µg/L) | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for dissolved zinc greatly exceeded the data validation limit of 30% at 107.2%. The reported results for dissolved zinc were assigned J qualifiers for the parent and field duplicate samples, and J qualifiers for the results for dissolved zinc in the associated samples due to evidence of extremely poor precision (RPD > 100%).</p> <p>An RPD value could not be calculated for dissolved nickel for the field duplicate pair MW-1 and DUP-9-29-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detection in the parent sample was greater than two times the reporting limit, dissolved nickel was qualified as J for the parent sample MW-1 and UJ for the duplicate sample DUP-9-29-22.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MW-1 | 2209h02-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | SMW-4 | 2209h02-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MW-2 | 2209h02-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | MW-5 | 2209h02-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MW-1 | 2209h02-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | SMW-4 | 2209h02-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MW-2 | 2209h02-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MW-5 | 2209h02-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|--------------------|
| 2-Methylnaphthalene | SW8270C | MW-1 | 2209h02-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | SMW-4 | 2209h02-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MW-2 | 2209h02-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MW-5 | 2209h02-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MW-1 | 2209h02-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | SMW-4 | 2209h02-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MW-2 | 2209h02-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MW-5 | 2209h02-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acetone | SW8260B | Trip Blank | 2209H02-008a | 3.2 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-09-29-22 | 2209H02-001a | 5.4 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | MW-1 | 2209H02-002a | 3.3 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | SMW-4 | 2209H02-003a | 3.7 | 10 | µg/L | U | MDLRL, TBD |
| Arsenic, Dissolved | E200.8 | MW-5 | 2209H02-005E | 0.00086 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MW-5 | 2209H02-005D | 0.00097 | 0.0010 | mg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | EB-09-29-22 | 2209H02-001E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MW-1 | 2209H02-002E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | SMW-4 | 2209H02-003E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MW-2 | 2209H02-004E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MW-5 | 2209H02-005E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | DUP-9-29-22 | 2209H02-006E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Chromium, Total | E 200.7 | EB-09-29-22 | 2209H02-001D | 0.0025 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Chromium, Total | E 200.7 | MW-1 | 2209H02-002D | 0.0029 | 0.0060 | mg/L | U | EBD, HR-LCS, MDLRL |
| Chromium, Total | E 200.7 | SMW-4 | 2209H02-003D | 0.0040 | 0.0060 | mg/L | U | EBD, HR-LCS, MDLRL |
| Chromium, Total | E 200.7 | MW-2 | 2209H02-004D | 0.0050 | 0.0060 | mg/L | U | EBD, HR-LCS, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|--------------------|
| Chromium, Total | E 200.7 | DUP-9-29-22 | 2209H02-006D | 0.0033 | 0.0060 | mg/L | U | EBD, HR-LCS, MDLRL |
| Fluorene | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MW-1 | 2209h02-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | SMW-4 | 2209h02-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MW-2 | 2209h02-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MW-5 | 2209h02-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | MW-1 | 2209H02-002E | 0.00013 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-9-29-22 | 2209H02-006E | 0.00012 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | SMW-4 | 2209H02-003D | 0.00036 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | SMW-4 | 2209H02-003E | ND | 0.00020 | mg/L | UJ | LR-MS |
| Mercury, Total | E245.1 | SMW-4 | 2209H02-003D | ND | 0.0010 | mg/L | UJ | LR-MS |
| Nickel, Dissolved | 200.7 | DUP-9-29-22 | 2209H02-006E | ND | 0.010 | mg/L | UJ | ERPD-FD |
| Nickel, Dissolved | 200.7 | MW-1 | 2209H02-002E | 0.022 | 0.010 | mg/L | J | ERPD-FD |
| Naphthalene | SW8270C | EB-09-29-22 | 2209h02-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MW-1 | 2209h02-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | SMW-4 | 2209h02-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MW-2 | 2209h02-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MW-5 | 2209h02-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-9-29-22 | 2209h02-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| TPH DRO | SW8015 | EB-09-29-22 | 2209H02-001C | 0.045 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | MW-1 | 2209H02-002C | 0.017 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | SMW-4 | 2209H02-003C | 0.022 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | MW-2 | 2209H02-004C | 0.038 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-29-22 | 2209H02-006C | 0.030 | 0.064 | mg/L | U | MBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | SMW-4 | 2209H02-003E | 0.046 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | EB-09-29-22 | 2209H02-001a | 0.46 | 1.5 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------------------|
| Zinc, Dissolved | E 200.7 | MW-1 | 2209H02-002E | 0.096 | 0.010 | mg/L | J+ | ERPD-FD, HR-LCS |
| Zinc, Dissolved | E 200.7 | EB-09-29-22 | 2209H02-001E | 0.0072 | 0.010 | mg/L | J+ | ERPD-FD, HR-LCS, MDLRL |
| Zinc, Dissolved | E 200.7 | SMW-4 | 2209H02-003E | 0.055 | 0.010 | mg/L | JB | EBD, ERPD-FD, HR-LCS |
| Zinc, Dissolved | E 200.7 | MW-2 | 2209H02-004E | 0.037 | 0.010 | mg/L | JB | EBD, ERPD-FD, HR-LCS |
| Zinc, Dissolved | E 200.7 | DUP-9-29-22 | 2209H02-006E | 0.029 | 0.010 | mg/L | JB | EBD, ERPD-FD, HR-LCS |
| Zinc, Dissolved | E 200.7 | MW-5 | 2209H02-005E | 0.029 | 0.050 | mg/L | U | EBD, ERPD-FD, HR-LCS, MDLRL |
| Zinc, Total | E 200.7 | MW-1 | 2209H02-002D | 0.0047 | 0.010 | mg/L | U | MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0004 | Sample Start Date: 09/30/2022 |
| Date Validated: 01/31/2023 | Sample End Date: 09/30/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209H72 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-9-30-22 | 2209H72-001 |
| MW-4 | 2209H72-002 |
| SMW-2 | 2209H72-003 |
| OW-59 | 2209H72-004 |
| OW-14 | 2209H72-005 |
| OW-30 | 2209H72-006 |
| DUP-9-30-22 | 2209H72-007 |
| FB-9-30-22 | 2209H72-008 |
| Trip Blank | 2209H72-009 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Methods 8270C and 8270C SIM: 1-Methylnaphthalene was reported by EPA Method 8270C instead of EPA Method 8270C SIM because of their elevated concentrations for sample OW-14.

The LCSD had elevated recoveries for the "S" flagged compounds.

Method 8015D DRO/MRO: The LCS had elevated recovery. The LCSD had elevated recovery due to sample carryover.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

The trip blank sample was received but was not included on the CoC. The laboratory logged in the sample and performed the appropriate volatile analysis. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|-----------|----------------------------|-----------------|
| 200.7 | OW-14 | Dissolved and Total Barium | 5 |
| 8015D | OW-30 | TPH DRO and MRO | 10 |
| 8015D | OW-14 | TPH GRO | 50 |
| 8260B | OW-14 | Select VOCs | 50 |
| 8260B | OW-30 | MTBE | 50 |
| 8260B | OW-14 | Benzene | 500 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 5.6°C and 9.1°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.6°C as noted on the CoC.

The cooler temperatures above 6°C were evaluated to be acceptable since the samples were received at the laboratory on the same day (within 24 hours) of the last sample collection time, and temperature equilibrium had not been established.

The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|------------|-------|---------------|
| 200.7 | Total Zinc | 70537 | 0.0055 mg/L |
| 8015D | TPH DRO | 70553 | 0.045 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|----------------------------|
| 200.7 | Total Metals | 70537 | Not Prepared |
| 200.7 | Dissolved Metals | A91612 | Not Prepared |
| 200.7 | Dissolved Metals | C91551 | EB-9-30-22 |
| 200.8 | Total Metals | 70537 | Not Prepared |
| 200.8 | Dissolved Metals | A91522 | OW-30, DUP-9-30-22 |
| 245.1 | Total and Dissolved Mercury | 70628 | OW-14 |
| 504.1 | EDB | 70550 | MW-4 |
| 504.1 | EDB | 70551 | Not Prepared |
| 4500CN E | Cyanide | WG1937600 | Not Associated, EB-9-30-22 |
| 4500CN E | Cyanide | WG1937792 | Not Associated |
| 8015D | TPH DRO and MRO | 70553 | Not Prepared |
| 8015D | TPH GRO | R91497 | MW-4 |
| 8260B | VOCs | R91600 | Not Prepared |
| 8270C SIM | SVOCs | 70583 | Not Prepared |
| 8270C | SVOCs | 70583 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Chromium | 70537 | 152% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Beryllium | C91551 | 67.2% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Zinc | C91551 | 137% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70553 | 88.5% | 537% | 31.7-75.4% | 143% | 20% |
| 8270C SIM | Naphthalene | 70583 | Acceptable | 84.0% | 15-78.3% | Acceptable | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 70583 | Acceptable | 85.0% | 15-79.6% | Acceptable | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 70583 | Acceptable | 85.0% | 15-78.6% | Acceptable | 30.5% |
| 8270C SIM | Fluorene | 70583 | Acceptable | 96.0% | 15-96% | Acceptable | 25.1% |
| 8270C SIM | Anthracene | 70583 | Acceptable | Acceptable | 21.1-106% | 18.0% | 14.4% |
| 8270C SIM | Fluoranthene | 70583 | Acceptable | Acceptable | 32.8-119% | 18.7% | 14.8% |
| 8270C SIM | Pyrene | 70583 | Acceptable | Acceptable | 34.1-110% | 19.2% | 19.2% |
| 8270C SIM | Indeno(1,2,3-cd)pyrene | 70583 | Acceptable | Acceptable | 24.7-152% | 22.4% | 21.3% |

Target analytes with LCS and/or LCSD recoveries greater than the data validation and/or laboratory QC limits were qualified as J+ if detected in the associated samples due to evidence of potential high bias. Non-detection of these analytes in the associated samples did not require qualification.

Dissolved beryllium was not detected in the associated samples and the results were qualified as UJ due to evidence of potential low bias,

The analytes with LCS/LCSD RPD values that were greater than the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------|--------|--------------------|-----------|
| 8015D | BFB | SMW-2 | 1,020% | 70-130% |
| 8015D | BFB | OW-59 | 6,210% | 70-130% |

TPH GRO was detected in the Method 8015D analyses of samples SMW-2 and OW-59, and these results were assigned J+ qualifiers to indicate potential high bias.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C analysis of samples SMW-2 and OW-30, and qualification of sample data was not required.

The TPH DRO and TPH MRO results for sample OW-30 were not qualified based on the surrogate non-conformances in the Method 8015D analysis since the applied dilution of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-9-30-22, and one equipment blank sample, EB-9-30-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Total Xylenes | 0.47 µg/L |
| FB-9-30-22 | 8260B | Total Xylenes | 0.47 µg/L |
| EB-9-30-22 | 8260B | Acetone | 7.0 µg/L |
| EB-9-30-22 | 8260B | Total Xylenes | 0.43 µg/L |
| EB-9-30-22 | 200.7 | Dissolved Zinc | 0.0062 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples detection did not require qualification.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-30-22 was collected as a field duplicate of sample MW-4.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for dissolved zinc exceeded the data validation limit of 30% at 73.2%. The dissolved zinc results for samples MW-4 and DUP-9-30-22 were assigned J qualifiers due to evidence of poor precision.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batches WG1937600 and WG1937792 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MW-4 | Mercury | ND | 0.000098 |
| MW-4 | Arsenic | 0.00068 | 0.00072 |
| SMW-2 | Arsenic | 0.0019 | 0.0021 |
| OW-59 | Nickel | 0.031 | 0.040 |
| OW-14 | Nickel | 0.067 | 0.078 |
| OW-30 | Nickel | 0.075 | 0.081 |
| SMW-2 | Silver | 0.0057 | 0.0078 |
| OW-59 | Silver | 0.0023 | 0.0048 |
| OW-14 | Silver | ND | 0.0014 |
| EB-9-30-22 | Zinc | ND | 0.0062 |
| MW-4 | Zinc | ND | 0.026 |
| SMW-2 | Zinc | ND | 0.020 |
| OW-59 | Zinc | 0.0091 | 0.014 |
| OW-14 | Zinc | ND | 0.0092 |
| OW-30 | Zinc | ND | 0.016 |
| DUP-9-30-22 | Zinc | ND | 0.056 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: MW-4
Field Duplicate Sample ID: DUP-9-30-22 | | | | |
|--|----------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.021 mg/L | 0.018 mg/L | 15.4% |
| Barium, Total | E 200.7 | 0.021 mg/L | 0.021 mg/L | 0.0% |
| Chromium, Total | E 200.7 | 0.0036 mg/L | ND (0.0060 mg/L) | DL |
| Zinc, Dissolved | E 200.7 | 0.026 mg/L | 0.056 mg/L | 73.2% |
| Arsenic, Dissolved | E200.8 | 0.00072 mg/L | 0.00073 mg/L | 1.4% +/-RL |
| Arsenic, Total | E200.8 | 0.00068 mg/L | 0.00078 mg/L | 13.7% +/-RL |
| Mercury, Dissolved | E245.1 | 0.000098 mg/L | ND (0.00020 mg/L) | DL |
| TPH DRO | SW8015 | 0.020 mg/L | 0.022 mg/L | 9.5% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>RPD value for dissolved zinc exceeded the data validation limit of 30% at 73.2%, which was evidence of poor precision. The dissolved zinc results were qualified as J for samples MW-4 and DUP-9-30-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | SMW-2 | 2209H72-003a | 0.21 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-59 | 2209H72-004a | 0.27 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-30 | 2209H72-006a | 0.23 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-30 | 2209h72-006c | 0.72 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-14 | 2209H72-005C | 20 | 5.0 | µg/L | J+ | HR-LCS |
| Acetone | SW8260B | OW-30 | 2209H72-006a | 3.2 | 10 | µg/L | U | EBD, MDLRL |
| Acetone | SW8260B | EB-9-30-22 | 2209H72-001a | 7.0 | 10 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-14 | 2209h72-005c | 0.68 | 0.30 | µg/L | J | ERPD-LCS |
| Anthracene | SW8270C | EB-9-30-22 | 2209h72-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | MW-4 | 2209h72-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | SMW-2 | 2209h72-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | OW-59 | 2209h72-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | DUP-9-30-22 | 2209h72-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Anthracene | SW8270C | OW-30 | 2209h72-006c | 0.22 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Arsenic, Dissolved | E200.8 | MW-4 | 2209H72-002E | 0.00072 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-30 | 2209H72-006E | 0.00076 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-9-30-22 | 2209H72-007E | 0.00073 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MW-4 | 2209H72-002D | 0.00068 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-30 | 2209H72-006D | 0.00092 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-9-30-22 | 2209H72-007D | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | EB-9-30-22 | 2209H72-001E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | MW-4 | 2209H72-002E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | SMW-2 | 2209H72-003E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | OW-59 | 2209H72-004E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | OW-14 | 2209H72-005E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Beryllium, Dissolved | E 200.7 | OW-30 | 2209H72-006E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Bis(2-ethylhexyl)phthalate | SW8270C | OW-30 | 2209H72-006C | 8.6 | 10 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | SMW-2 | 2209H72-003D | 0.022 | 0.0060 | mg/L | J+ | HR-LCS |
| Chromium, Total | E 200.7 | MW-4 | 2209H72-002D | 0.0036 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-30 | 2209H72-006E | 0.0025 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-30 | 2209H72-006D | 0.0057 | 0.0060 | mg/L | J | MDLRL |
| Fluoranthene | SW8270C | EB-9-30-22 | 2209h72-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | MW-4 | 2209h72-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | SMW-2 | 2209h72-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | OW-59 | 2209h72-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | OW-14 | 2209h72-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | OW-30 | 2209h72-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluoranthene | SW8270C | DUP-9-30-22 | 2209h72-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-14 | 2209h72-005c | 0.78 | 0.30 | µg/L | J+ | HR-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | EB-9-30-22 | 2209h72-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Indeno(1,2,3-cd)pyrene | SW8270C | MW-4 | 2209h72-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | SMW-2 | 2209h72-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-59 | 2209h72-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-14 | 2209h72-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | OW-30 | 2209h72-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Indeno(1,2,3-cd)pyrene | SW8270C | DUP-9-30-22 | 2209h72-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | SMW-2 | 2209H72-003a | 0.27 | 1.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-14 | 2209H72-005a | 26 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | SMW-2 | 2209H72-003E | 0.000058 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-30 | 2209H72-006E | 0.00044 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | MW-4 | 2209H72-002E | 0.000098 | 0.00020 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-14 | 2209h72-005c | 15 | 0.30 | µg/L | J+ | HR-LCS |
| n-Butylbenzene | SW8260B | OW-14 | 2209H72-005a | 16 | 150 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-9-30-22 | 2209h72-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MW-4 | 2209h72-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | SMW-2 | 2209h72-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-59 | 2209h72-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-14 | 2209h72-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-30 | 2209h72-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-9-30-22 | 2209h72-007c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| sec-Butylbenzene | SW8260B | SMW-2 | 2209H72-003a | 0.2 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-59 | 2209H72-004a | 0.23 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-14 | 2209H72-005a | 11 | 50 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | OW-30 | 2209H72-006a | 0.21 | 1.0 | µg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-59 | 2209H72-004E | 0.0048 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-14 | 2209H72-005E | 0.0014 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | OW-59 | 2209H72-004D | 0.0023 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|------------------------------|
| TPH DRO | SW8015 | EB-9-30-22 | 2209H72-001C | ND | 0.064 | mg/L | UJ | ERPD-LCS |
| TPH DRO | SW8015 | OW-14 | 2209H72-005C | 3.1 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-30 | 2209H72-006C | 7.9 | 0.64 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | SMW-2 | 2209H72-003C | 0.34 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | OW-59 | 2209H72-004C | 0.39 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | MW-4 | 2209H72-002C | 0.020 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-30-22 | 2209H72-007C | 0.022 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | SMW-2 | 2209h72-003a | 0.11 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-59 | 2209h72-004a | 0.28 | 0.050 | mg/L | J+ | HR-SUR |
| Vanadium, Dissolved | E 200.7 | OW-59 | 2209H72-004E | 0.0029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-59 | 2209H72-004D | 0.014 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-30 | 2209H72-006D | 0.0048 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | Trip Blank | 2209H72-009a | 0.47 | 1.5 | µg/L | J | MDLRL |
| Xylenes, Total | SW8260B | EB-9-30-22 | 2209H72-001a | 0.43 | 1.5 | µg/L | U | MDLRL, TBD |
| Xylenes, Total | SW8260B | FB-9-30-22 | 2209H72-008a | 0.47 | 1.5 | µg/L | U | MDLRL, TBD |
| Zinc, Dissolved | E 200.7 | SMW-2 | 2209H72-003E | 0.020 | 0.010 | mg/L | JB | EBD, HR-LCS |
| Zinc, Dissolved | E 200.7 | OW-59 | 2209H72-004E | 0.014 | 0.010 | mg/L | JB | EBD, HR-LCS |
| Zinc, Dissolved | E 200.7 | OW-30 | 2209H72-006E | 0.016 | 0.010 | mg/L | JB | EBD, HR-LCS |
| Zinc, Dissolved | E 200.7 | EB-9-30-22 | 2209H72-001E | 0.0062 | 0.010 | mg/L | U | EBD, HR-LCS, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-14 | 2209H72-005E | 0.0092 | 0.010 | mg/L | U | EBD, HR-LCS, MDLRL |
| Zinc, Dissolved | E 200.7 | MW-4 | 2209H72-002E | 0.026 | 0.010 | mg/L | JB | EBD, ERPD-FD, HR-LCS |
| Zinc, Dissolved | E 200.7 | DUP-9-30-22 | 2209H72-007E | 0.056 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Total | E 200.7 | OW-59 | 2209H72-004D | 0.0091 | 0.010 | mg/L | U | MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/07/2022 |
| Date Validated: 01/17/2023 | Sample End Date: 09/07/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209349 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-9-7-22 | 2209349-001 |
| OW-50 | 2209349-002 |
| OW-52 | 2209349-003 |
| OW-29 | 2209349-004 |
| OW-54 | 2209349-005 |
| OW-66 | 2209349-006 |
| OW-55 | 2209349-007 |
| OW-13 | 2209349-008 |
| OW-56 | 2209349-009 |
| FB-9-7-22 | 2209349-010 |
| DUP-9-7-22 | 2209349-011 |
| Trip Blank | 2209349-012 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 808 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: 1-methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIMs because of its elevated concentration for sample OW-55.

Naphthalene and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for sample OW-66.

Method 8015D DRO: The LCS/LCSD had slightly elevated recoveries.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

J – The identification of the analyte is acceptable; the reported value is an estimate.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|--------------|----------------------------|-----------------|
| 200.7 | OW-66 | Total and Dissolved Barium | 5 |
| 200.8 | OW-54, OW-66 | Total Lead | 5 |
| 8015D | OW-66, OW-55 | TPH DRO and MRO | 5 |
| 8260B | OW-54 | Select VOCs | 5 |
| 8015D | OW-66, OW-55 | TPH GRO | 50 |
| 8260B | OW-54 | MTBE | 50 |
| 8260B | OW-66, OW-55 | Select VOCs | 50 |
| 8260B | OW-29 | MTBE | 100 |
| 8260B | OW-66 | Benzene, Toluene | 500 |
| 8260B | OW-55 | Benzene | 500 |



VALIDATION CRITERIA CHECKLIST

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.3°C and 2.9°C as noted on the Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.9°C as noted on the CoC.

The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|------------|-------|---------------|
| 200.7 | Total Zinc | 70055 | 0.0040 mg/L |
| 8015D | TPH DRO | 70050 | 0.031 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentrations did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|----------------------------|
| 200.7 | Total Metals | 70055 | EB-9-7-22 |
| 200.7 | Dissolved Metals | B91088 | OW-50 |
| 200.8 | Total Metals | 70055 | Not Prepared |
| 200.8 | Dissolved Metals | A91030 | EB-9-7-22, OW-50 |
| 245.1 | Total and Dissolved Mercury | 70231 | DUP-9-7-22 |
| 504.1 | EDB | 70123 | Not Prepared |
| 4500CN E | Cyanide | WG1925221 | Not Associated, OW-50 |
| 4500CN E | Cyanide | WG1925290 | DUP-9-7-22, Not Associated |
| 8015D | TPH DRO and MRO | 70050 | Not Prepared |
| 8015D | TPH GRO | R90998 | Not Prepared |
| 8260B | VOCs | R91002 | OW-50 |
| 8260B | VOCs | R91045 | Not Prepared |
| 8270C SIM | SVOCs | 70053 | Not Prepared |
| 8270C | SVOCs | 70053 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

The MS and MSD recoveries for cyanide in Method 4500CN E batch WG1925221 were outside the laboratory QC limits of 90.0-110% at 78.6% and 79.7%, respectively. However, the recoveries were within data validation limits of 75-125%. Validation action was not required.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Barium | 70055 | 51.0% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Nickel | 70055 | 142% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Zinc | 70055 | 140% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 70055 | 135% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70050 | 91.6% | 84.5% | 31.7-75.4% | Acceptable | 20% |
| 8270C | Pyrene | 70053 | Acceptable | Acceptable | 61-123% | 15.7% | 11.8% |
| 8270C SIM | Naphthalene | 70053 | Acceptable | Acceptable | 21.3-79.9% | 63.4% | 25.6% |
| 8270C SIM | 1-Methylnaphthalene | 70053 | Acceptable | Acceptable | 22.2-80.3% | 64.9% | 25% |
| 8270C SIM | 2-Methylnaphthalene | 70053 | Acceptable | Acceptable | 20.6-80.1% | 68.4% | 25% |
| 8270C SIM | Acenaphthene | 70053 | Acceptable | Acceptable | 29.8-82.7% | 51.7% | 27.8% |
| 8270C SIM | Fluorene | 70053 | Acceptable | Acceptable | 33.3-86% | 32.7% | 26.4% |

Total barium was detected in associated samples in Method 200.7 batch 70055 and the results were assigned J-qualifiers due to evidence of potential low bias. Total barium was not detected in associated sample EB-9-7-22 and the result was assigned a UJ qualifier.

The target analytes total nickel, total selenium, total zinc, and TPH DRO were detected in associated samples, and the results were qualified as J+ based on the evidence of potential high bias. Non-detections of these analytes in the associated samples did not require qualification based on the evidence of potential high bias.

The analytes with LCS/LCSD RPD values that were above the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

The recovery of the Method 8015D surrogate BFB for sample OW-56 was outside the laboratory acceptance range of 70-130% at 951%. TPH GRO was detected in the analysis of sample OW-56, and this result was qualified as J+ to indicate a potential high bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of samples OW-29, OW-54, OW-66, OW-55, OW-13, OW-56, and DUP-9-7-22 and for the Method 8270C analysis of sample OW-66, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-9-7-22, and one equipment blank sample, EB-9-7-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|--------------------------|----------------------|
| FB-9-7-22 | 8260B | 2-Butanone | 6.8 µg/L |
| EB-9-7-22 | 8260B | 2-Butanone | 22 µg/L |
| EB-9-7-22 | 8260B | Acetone | 18 µg/L |
| EB-9-7-22 | 8015D | TPH DRO | 0.64 mg/L |
| EB-9-7-22 | 8015D | TPH MRO | 0.91 mg/L |
| EB-9-7-22 | 200.7 | Dissolved Chromium | 0.0025 mg/L |
| EB-9-7-22 | 200.7 | Dissolved Zinc | 0.0046 mg/L |
| EB-9-7-22 | 200.7 | Total Zinc | 0.0062 mg/L |
| EB-9-7-22 | 245.1 | Dissolved Mercury | 0.00019 mg/L |
| EB-9-7-22 | 245.1 | Total Mercury | 0.00018 mg/L |

Detections of TPH DRO, TPH MRO, dissolved mercury, and total mercury in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of 2-butanone, dissolved zinc, and total mercury in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The total zinc results in Method 200.7 batch 70055 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-7-22 was collected as a field duplicate of sample OW-52.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for dissolved zinc exceeded the data validation limit of 30% at 70.3%. The dissolved zinc results for samples OW-52 and DUP-9-7-22 were assigned J qualifiers due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for these analyses and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 4500CN E | Cyanide | WG1925221 | Not Associated, EB-9-7-22 |
| 4500CN E | Cyanide | WG1925200 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD for the laboratory duplicate prepared from a project sample was not applicable since the result for both measurements were non-detections for cyanide and an RPD could not be calculated.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| DUP-9-7-22 | Mercury | 0.00015 | 0.00017 |
| EB-9-7-22 | Mercury | 0.00018 | 0.00019 |
| OW-29 | Mercury | 0.00016 | 0.00017 |
| OW-50 | Barium | 0.047 | 0.052 |
| OW-29 | Barium | 0.075 | 0.078 |
| OW-13 | Barium | 0.019 | 0.021 |
| EB-9-7-22 | Chromium | ND | 0.0025 |
| OW-29 | Nickel | 0.023 | 0.027 |
| OW-54 | Nickel | 0.21 | 0.23 |
| OW-66 | Nickel | 0.30 | 0.33 |
| OW-55 | Nickel | 0.22 | 0.23 |
| OW-56 | Nickel | 0.064 | 0.065 |
| OW-29 | Silver | ND | 0.0016 |
| OW-54 | Silver | ND | 0.0019 |
| OW-55 | Silver | ND | 0.0019 |
| OW-29 | Vanadium | ND | 0.0017 |
| OW-13 | Vanadium | ND | 0.0031 |



VALIDATION CRITERIA CHECKLIST

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| DUP-9-7-22 | Zinc | ND | 0.025 |
| OW-50 | Zinc | ND | 0.044 |
| OW-52 | Zinc | ND | 0.012 |
| OW-29 | Zinc | ND | 0.030 |
| OW-66 | Zinc | 0.0078 | 0.010 |
| OW-13 | Zinc | ND | 0.031 |
| OW-56 | Zinc | 0.0093 | 0.012 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-52
Field Duplicate Sample ID: DUP-9-7-22 | | | | |
|--|----------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.029 mg/L | 0.032 mg/L | 9.8% |
| Barium, Total | E 200.7 | 0.038 mg/L | 0.036 mg/L | 5.4% |
| Chromium, Total | E 200.7 | 0.0020 mg/L | 0.0033 mg/L | 49.1% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.012 mg/L | 0.025 mg/L | 70.3% |
| Arsenic, Dissolved | E200.8 | 0.00061 mg/L | 0.00051 mg/L | 17.9% +/-RL |
| Arsenic, Total | E200.8 | 0.00078 mg/L | 0.00064 mg/L | 19.7% +/-RL |
| Lead, Dissolved | E200.8 | ND (0.00050 mg/L) | 0.00013 mg/L | DL |
| Lead, Total | E200.8 | 0.00045 mg/L | 0.00032 mg/L | 33.8% +/-RL |
| Mercury, Dissolved | E245.1 | 0.00019 mg/L | 0.00017 mg/L | 11.1% +/-RL |
| Mercury, Total | E245.1 | 0.00019 mg/L | 0.00015 mg/L | 23.5% +/-RL |
| TPH DRO | SW8015 | 0.029 mg/L | 0.031 mg/L | 6.7% +/-RL |
| MTBE | SW8260B | 4.1 µg/L | 4.2 µg/L | 2.4% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>RPD value for dissolved zinc exceeded the data validation limit of 30% at 70.3%, which was evidence of poor precision. The dissolved zinc results were qualified as J for samples OW-52 and DUP-9-7-22.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | OW-54 | 2209349-005a | 2.7 | 5.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-29 | 2209349-004a | 0.56 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dichloroethane | SW8260B | OW-13 | 2209349-008a | 0.83 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | OW-55 | 2209349-007a | 41 | 50 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-29 | 2209349-004c | 0.82 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-54 | 2209349-005c | 0.68 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-56 | 2209349-009c | 0.68 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-66 | 2209349-006c | 19 | 0.30 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-55 | 2209349-007c | 25 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-50 | 2209349-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-52 | 2209349-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-29 | 2209349-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1-Methylnaphthalene | SW8270C | OW-54 | 2209349-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-13 | 2209349-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-56 | 2209349-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Butanone | SW8260B | EB-9-7-22 | 2209349-001a | 22 | 10 | µg/L | JB | FBD |
| 2-Butanone | SW8260B | FB-9-7-22 | 2209349-010a | 6.8 | 10 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-66 | 2209349-006c | 40 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-55 | 2209349-007c | 10 | 0.30 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-50 | 2209349-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-52 | 2209349-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-29 | 2209349-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-54 | 2209349-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-13 | 2209349-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-56 | 2209349-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-55 | 2209349-007c | 0.56 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-50 | 2209349-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-52 | 2209349-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-29 | 2209349-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-54 | 2209349-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-13 | 2209349-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-56 | 2209349-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | OW-66 | 2209349-006c | 0.24 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Anthracene | SW8270C | OW-66 | 2209349-006c | 0.20 | 0.30 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | OW-52 | 2209349-003E | 0.00061 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-29 | 2209349-004E | 0.00055 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-13 | 2209349-008E | 0.00057 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-9-7-22 | 2209349-011E | 0.00051 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-52 | 2209349-003D | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-29 | 2209349-004D | 0.00055 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-13 | 2209349-008D | 0.00063 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-9-7-22 | 2209349-011D | 0.00064 | 0.0010 | mg/L | J | MDLRL |
| Barium, Total | E 200.7 | OW-50 | 2209349-002D | 0.047 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-52 | 2209349-003D | 0.038 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-29 | 2209349-004D | 0.075 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-54 | 2209349-005D | 0.47 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-66 | 2209349-006D | 2.5 | 0.0150 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-55 | 2209349-007D | 0.69 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-13 | 2209349-008D | 0.019 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | OW-56 | 2209349-009D | 0.41 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | DUP-9-7-22 | 2209349-011D | 0.036 | 0.0030 | mg/L | J- | LR-SUR |
| Barium, Total | E 200.7 | EB-9-7-22 | 2209349-001D | ND | 0.0030 | mg/L | UJ | LR-SUR |
| Benzene | SW8260B | OW-56 | 2209349-009a | 0.88 | 1.0 | µg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | EB-9-7-22 | 2209349-001E | 0.0025 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-52 | 2209349-003D | 0.0020 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-56 | 2209349-009D | 0.0049 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP-9-7-22 | 2209349-011D | 0.0033 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-50 | 2209349-002F | 2.3 | 5.0 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-29 | 2209349-004F | 4.74 | 5.0 | µg/L | J | MDLRL |
| Cyanide, Total | E335.4 | OW-56 | 2209349-009F | 3.73 | 5.0 | µg/L | J | MDLRL |
| Fluorene | SW8270C | OW-66 | 2209349-006c | 0.74 | 0.30 | µg/L | J | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Fluorene | SW8270C | OW-55 | 2209349-007c | 1.6 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-50 | 2209349-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-52 | 2209349-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-29 | 2209349-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-54 | 2209349-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-13 | 2209349-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | OW-56 | 2209349-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Isopropylbenzene | SW8260B | OW-55 | 2209349-007a | 19 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-66 | 2209349-006E | 0.00045 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-56 | 2209349-009E | 0.00041 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-9-7-22 | 2209349-011E | 0.00013 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-50 | 2209349-002D | 0.000078 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-52 | 2209349-003D | 0.00045 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-9-7-22 | 2209349-011D | 0.00032 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-50 | 2209349-002E | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-52 | 2209349-003E | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-29 | 2209349-004E | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-54 | 2209349-005E | 0.00016 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-66 | 2209349-006E | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-55 | 2209349-007E | 0.00016 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-13 | 2209349-008E | 0.00016 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-56 | 2209349-009E | 0.00015 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | DUP-9-7-22 | 2209349-011E | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-9-7-22 | 2209349-001E | 0.00019 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-54 | 2209349-005D | 0.00022 | 0.00020 | mg/L | JB | EBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Mercury, Total | E245.1 | OW-50 | 2209349-002D | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-52 | 2209349-003D | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-29 | 2209349-004D | 0.00016 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-66 | 2209349-006D | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-55 | 2209349-007D | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-13 | 2209349-008D | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-56 | 2209349-009D | 0.00016 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | DUP-9-7-22 | 2209349-011D | 0.00015 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | EB-9-7-22 | 2209349-001D | 0.00018 | 0.00020 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-66 | 2209349-006c | 160 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-55 | 2209349-007c | 19 | 0.30 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-50 | 2209349-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-52 | 2209349-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-29 | 2209349-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-54 | 2209349-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-13 | 2209349-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | OW-56 | 2209349-009c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Nickel, Total | E 200.7 | OW-29 | 2209349-004D | 0.023 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-54 | 2209349-005D | 0.21 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-66 | 2209349-006D | 0.30 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-55 | 2209349-007D | 0.22 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-56 | 2209349-009D | 0.064 | 0.010 | mg/L | J+ | HR-LCS |
| n-Propylbenzene | SW8260B | OW-55 | 2209349-007a | 41 | 50 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-9-7-22 | 2209349-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-50 | 2209349-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-------------------------|
| Pyrene | SW8270C | OW-52 | 2209349-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-29 | 2209349-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-54 | 2209349-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-66 | 2209349-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-55 | 2209349-007c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-13 | 2209349-008c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-56 | 2209349-009c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP-9-7-22 | 2209349-011c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Selenium, Dissolved | E200.8 | OW-66 | 2209349-006E | 0.00045 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-54 | 2209349-005D | 0.0017 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | OW-66 | 2209349-006D | 0.0023 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | OW-55 | 2209349-007D | 0.0015 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | OW-56 | 2209349-009D | 0.0005 | 0.0010 | mg/L | J+ | HR-LCS, MDLRL |
| Silver, Dissolved | E 200.7 | OW-29 | 2209349-004E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-54 | 2209349-005E | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-55 | 2209349-007E | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | EB-9-7-22 | 2209349-001C | 0.64 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-66 | 2209349-006C | 7.1 | 0.32 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OW-54 | 2209349-005C | 2.0 | 0.064 | mg/L | JB | EBD, HR-LCS |
| TPH DRO | SW8015 | OW-55 | 2209349-007C | 4.5 | 0.32 | mg/L | JB | EBD, HR-LCS |
| TPH DRO | SW8015 | OW-29 | 2209349-004C | 0.44 | 0.064 | mg/L | U | EBD, HR-LCS |
| TPH DRO | SW8015 | OW-50 | 2209349-002C | 0.065 | 0.064 | mg/L | U | EBD, HR-LCS, MBD |
| TPH DRO | SW8015 | OW-13 | 2209349-008C | 0.076 | 0.064 | mg/L | U | EBD, HR-LCS, MBD |
| TPH DRO | SW8015 | OW-52 | 2209349-003C | 0.029 | 0.064 | mg/L | U | EBD, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-7-22 | 2209349-011C | 0.031 | 0.064 | mg/L | U | EBD, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | OW-56 | 2209349-009a | 0.27 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | OW-54 | 2209349-005C | 0.12 | 0.080 | mg/L | U | EBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| TPH ORO | SW8015 | OW-29 | 2209349-004C | 0.068 | 0.080 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-29 | 2209349-004E | 0.0017 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-54 | 2209349-005E | 0.0034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-66 | 2209349-006E | 0.0041 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-55 | 2209349-007E | 0.0052 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-13 | 2209349-008E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-56 | 2209349-009E | 0.0067 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-54 | 2209349-005D | 0.025 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-66 | 2209349-006D | 0.036 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-55 | 2209349-007D | 0.027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-56 | 2209349-009D | 0.014 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-50 | 2209349-002E | 0.044 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-29 | 2209349-004E | 0.030 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-54 | 2209349-005E | 0.017 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-66 | 2209349-006E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-55 | 2209349-007E | 0.014 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-13 | 2209349-008E | 0.031 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-56 | 2209349-009E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-52 | 2209349-003E | 0.012 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | DUP-9-7-22 | 2209349-011E | 0.025 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | EB-9-7-22 | 2209349-001E | 0.0046 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-54 | 2209349-005D | 0.020 | 0.010 | mg/L | JB | HR-SUR, MBD |
| Zinc, Total | E 200.7 | OW-55 | 2209349-007D | 0.026 | 0.010 | mg/L | JB | HR-SUR, MBD |
| Zinc, Total | E 200.7 | EB-9-7-22 | 2209349-001D | 0.0062 | 0.010 | mg/L | U | HR-SUR, MBD, MDLRL |
| Zinc, Total | E 200.7 | OW-66 | 2209349-006D | 0.0078 | 0.010 | mg/L | U | HR-SUR, MBD, MDLRL |
| Zinc, Total | E 200.7 | OW-56 | 2209349-009D | 0.0093 | 0.010 | mg/L | U | HR-SUR, MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/08/2022 |
| Date Validated: 01/17/2023 | Sample End Date: 09/08/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209441 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-08-22 | 2209441-001 |
| PW-3 | 2209441-002 |
| PW-4 | 2209441-003 |
| EAST LDU | 2209441-004 |
| WEST LDU | 2209441-005 |
| DUP 9-8-22 | 2209441-006 |
| FB 9-8-22 | 2209441-007 |
| TRIP BLANK | 2209441-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Chromatography (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 450 data points. The data completeness calculation does not include any submitted blank sample results. Fourteen data points were rejected. The data completeness measure for this data package is calculated to be 96.89% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: The recovery for chrysene was low in the LCS/LCSD. This compound is reported in both the 8270 SIM method and the standard 8270 method and is non-detect.

The recovery for 1,4-dioxane was low in the LCSD.

The "S" flagged surrogates for samples "East LDU" and "West LDU" were low due to the emulsive nature of the sample.

Method 8015D DRO: The LCS/LCSD had elevated recoveries.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

E – Estimated value. **Multiple analytes were flagged by the laboratory with the E flag. These results were assigned J qualifiers if detected, and non-detections were assigned UJ due to this lab identified non-conformance. The application of this laboratory flag to QC sample results in the laboratory report did not require qualification.**

J – Analyte detected below quantitation limits.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|-----------|------------------------------|-----------------|
| 200.7 | East LDU | Total and Dissolved Chromium | 5 |
| 200.7 | East LDU | Total and Dissolved Nickel | 5 |
| 200.7 | West LDU | Dissolved Nickel | 5 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements? No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures within the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 2.4°C and 3.8°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.4°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times? Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results? No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|----------------|-------|---------------|
| 200.7 | Total Barium | 70092 | 0.0018 mg/L |
| 200.8 | Total Antimony | 70092 | 0.00063 mg/L |
| 200.8 | Total Lead | 70092 | 0.00040 mg/L |
| 8015D | TPH DRO | 70105 | 0.052 mg/L |

Detections of total lead and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total barium and total lead in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 70092 | DUP 9-8-22 |
| 200.7 | Dissolved Metals | B91088 | Not Prepared |
| 200.8 | Total Metals | 70092 | Not Prepared |
| 200.8 | Dissolved Metals | A91030 | Not Prepared |
| 200.8 | Dissolved Selenium | A91078 | Not Prepared |
| 200.8 | Dissolved Metals | B91030 | DUP 9-8-22 |
| 245.1 | Total and Dissolved Mercury | 70232 | Not Prepared |
| 504.1 | EDB | 70123 | PW-3 |
| 504.1 | EDB | 70173 | Not Prepared |
| 4500CN E | Cyanide | WG1925290 | Not Associated, PW-3 |
| 8015D | TPH DRO and MRO | 70105 | Not Prepared |
| 8015D | TPH GRO | R90998 | Not Prepared |
| 8260B | VOCs | R90977 | PW-3 |
| 8270C SIM | SVOCs | 70094 | Not Prepared |
| 8270C | SVOCs | 70094 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|----------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.8 | Total Antimony | 70092 | 144% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70105 | 81.4% | 120% | 31.7-75.4% | 38.5% | 20% |
| 8270C | Pyrene | 70094 | Acceptable | Acceptable | 61-123% | 32.8% | 11.8% |
| 8270C SIM | 1,4-Dioxane | 70094 | Acceptable | 20.0% | 20.2-48.4% | Acceptable | 30.1% |
| 8270C SIM | Chrysene | 70094 | 51.0% | 48.0% | 55.3-115% | Acceptable | 20% |

Total antimony was not detected in the associated samples in Method 200.8 batch 70092 and qualification of the results was not required based on the evidence of potential high bias.

The target analyte TPH DRO was detected in associated samples, and the results were qualified as J+ based on the evidence of potential high bias.

The analytes with LCS/LCSD RPD values that exceeded the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

Non-detections of 1,4-dioxane and chrysene were qualified as UJ, and the detections of 1,4-dioxane in samples East LDU and West LDU were qualified as J-, due to evidence of low bias.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|-------------|--------------------|-----------|
| 8015D | BFB | East LDU | 166% | 70-130% |
| 8270C | 2-Fluorophenol | East LDU | 0.745% | 15-84.5% |
| 8270C | Phenol-d ₅ | East LDU | 2.53% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | East LDU | 4.59% | 15-108% |
| 8270C | 2-Fluorophenol | West LDU | 1.54% | 15-84.5% |
| 8270C | Phenol-d ₅ | West LDU | 0.0% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | West LDU | 5.29% | 15-108% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | EB-09-08-22 | 62.3% | 72-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | PW-3 | 63.6% | 72-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | PW-4 | 65.7% | 72-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | EAST LDU | 53.5% | 72-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | WEST LDU | 55.8% | 72-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | DUP 9-8-22 | 45.9% | 72-147% |

TPH GRO was detected in the Method 8015D analysis of sample East LDU, and this result was qualified as J+ to indicate a potential high bias.

The associated analytes in the acid fraction of samples East LDU and West LDU were not detected. Since these surrogates recovered at less than 10%, these associated results were qualified as R indicating rejected results, data not usable due to evidence of extreme low bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same



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fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of samples EB-09-08-22, PW-3, PW-4, East LDU, West LDU, and DUP 9-8-22, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, TRIP BLANK, one field blank sample, FB 9-8-22, and one equipment blank sample, EB-9-8-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|---------------------------|----------------------|
| TRIP BLANK | 8260B | Methylene Chloride | 4.8 µg/L |
| FB 9-8-22 | 8260B | 2-Butanone | 29 µg/L |
| FB 9-8-22 | 8260B | Acetone | 20 µg/L |
| EB-9-8-22 | 8260B | Dissolved Zinc | 0.0067 mg/L |
| EB-9-8-22 | 245.1 | Dissolved Mercury | 0.00012 mg/L |
| EB-9-8-22 | 245.1 | Total Mercury | 0.00017 mg/L |
| EB-9-8-22 | 8015D | TPH DRO | 0.058 mg/L |
| EB-9-8-22 | 8260B | Acetone | 8.3 µg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples and results greater than 10 times the blank detection did not require qualification.

The TPH DRO results for the samples in batch 70105 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP 9-8-22 was collected as a field duplicate of sample PW-3.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1925290 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: The target analyte chrysene was reported by both Method 8270C and Method 8270C SIM. This analyte was reported as not detected by both methods.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| DUP 9-8-22 | Mercury | 0.00015 | 0.00018 |
| East LDU | Arsenic | ND | 0.00079 |
| PW-3 | Barium | 0.010 | 0.011 |
| East LDU | Beryllium | 0.0014 | 0.0020 |
| West LDU | Beryllium | ND | 0.0013 |
| East LDU | Cobalt | 0.027 | 0.028 |
| East LDU | Nickel | 2.4 | 2.5 |
| West LDU | Nickel | 0.99 | 1.1 |
| PW-3 | Selenium | 0.00077 | 0.0010 |
| East LDU | Selenium | ND | 0.00045 |
| West LDU | Selenium | ND | 0.00070 |
| PW-3 | Silver | 0.0019 | 0.0058 |
| PW-4 | Silver | ND | 0.0037 |
| DUP 9-8-22 | Silver | ND | 0.0056 |
| PW-3 | Vanadium | ND | 0.0024 |
| PW-4 | Vanadium | ND | 0.0024 |
| DUP 9-8-22 | Vanadium | ND | 0.0026 |
| EB-09-08-22 | Zinc | ND | 0.0067 |
| PW-3 | Zinc | 0.0087 | 0.021 |
| PW-4 | Zinc | ND | 0.042 |
| DUP 9-8-22 | Zinc | ND | 0.016 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: PW-3
Field Duplicate Sample ID: DUP 9-8-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.011 mg/L | 0.01 mg/L | 9.5% |
| Barium, Total | E 200.7 | 0.010 mg/L | 0.011 mg/L | 9.5% |
| Cobalt, Total | E 200.7 | 0.013 mg/L | 0.013 mg/L | 0.0% |
| Silver, Dissolved | E 200.7 | 0.0058 mg/L | 0.0056 mg/L | 3.5% +/-RL |
| Silver, Total | E 200.7 | 0.0019 mg/L | ND (0.0050 mg/L) | DL |
| Vanadium, Dissolved | E 200.7 | 0.0024 mg/L | 0.0026 mg/L | 8.0% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.021 mg/L | 0.016 mg/L | 27.0% |
| Zinc, Total | E 200.7 | 0.0087 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00013 mg/L | 0.00024 mg/L | 59.5% +/-RL |
| Arsenic, Total | E200.8 | 0.0038 mg/L | 0.0041 mg/L | 7.6% |
| Lead, Total | E200.8 | 0.00007 mg/L | 0.00013 mg/L | 60.0% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0010 mg/L | 0.00071 mg/L | 33.9% +/-RL |
| Selenium, Total | E200.8 | 0.00077 mg/L | 0.0012 mg/L | 43.7% +/-RL |
| Mercury, Dissolved | E245.1 | 0.00017 mg/L | 0.00018 mg/L | 5.7% +/-RL |
| Mercury, Total | E245.1 | 0.00018 mg/L | 0.00015 mg/L | 18.2% +/-RL |
| TPH DRO | SW8015 | 0.058 mg/L | 0.047 mg/L | 21.0% +/-RL |
| Acetone | SW8260B | 7.9 µg/L | 7.1 µg/L | 10.7% +/-RL |
| Methylene Chloride | SW8260B | ND (3.0 µg/L) | 2.6 µg/L | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBL | Flagged as estimated by the laboratory. |
| MBD | Method blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| FBD | Field blank detection |
| EBD | Equipment blank detection |
| TBD | Trip blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| 1,3,5-Trimethylbenzene | SW8260B | WEST LDU | 2209441-005a | 0.61 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | WEST LDU | 2209441-005c | 7.1 | 1.0 | µg/L | J- | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | EB-09-08-22 | 2209441-001c | ND | 1.0 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | PW-3 | 2209441-002c | ND | 1.0 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | PW-4 | 2209441-003c | ND | 1.0 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | DUP 9-8-22 | 2209441-006c | ND | 1.0 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | EAST LDU | 2209441-004c | 0.34 | 1.0 | µg/L | J- | EBL, LR-LCS, MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | EAST LDU | 2209441-004C | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | WEST LDU | 2209441-005C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | EAST LDU | 2209441-004C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | WEST LDU | 2209441-005C | ND | 10 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2,4-Dinitrophenol | SW8270C | EAST LDU | 2209441-004C | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | WEST LDU | 2209441-005C | ND | 20 | µg/L | R | LR-SUR |
| 2-Butanone | SW8260B | EAST LDU | 2209441-004a | 8.2 | 10 | µg/L | U | FBD, MDLRL |
| 2-Methylphenol | SW8270C | EAST LDU | 2209441-004C | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | WEST LDU | 2209441-005C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | EAST LDU | 2209441-004C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | WEST LDU | 2209441-005C | ND | 10 | µg/L | R | LR-SUR |
| Acetone | SW8260B | EAST LDU | 2209441-004a | 56 | 10 | µg/L | JB | FBD |
| Acetone | SW8260B | WEST LDU | 2209441-005a | 10 | 10 | µg/L | U | FBD |
| Acetone | SW8260B | EB-09-08-22 | 2209441-001a | 8.3 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | PW-3 | 2209441-002a | 7.9 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | PW-4 | 2209441-003a | 9.9 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | DUP 9-8-22 | 2209441-006a | 7.1 | 10 | µg/L | U | FBD, MDLRL |
| Arsenic, Dissolved | E200.8 | PW-3 | 2209441-002E | 0.00013 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | EAST LDU | 2209441-004E | 0.00079 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | WEST LDU | 2209441-005E | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP 9-8-22 | 2209441-006E | 0.00024 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | WEST LDU | 2209441-005D | 0.00074 | 0.0010 | mg/L | J | MDLRL |
| Barium, Total | E 200.7 | PW-3 | 2209441-002D | 0.010 | 0.0030 | mg/L | JB | MBD |
| Barium, Total | E 200.7 | PW-4 | 2209441-003D | 0.013 | 0.0030 | mg/L | JB | MBD |
| Barium, Total | E 200.7 | DUP 9-8-22 | 2209441-006D | 0.011 | 0.0030 | mg/L | JB | MBD |
| Benzene | SW8260B | WEST LDU | 2209441-005a | 0.93 | 1.0 | µg/L | J | MDLRL |
| Benzoic Acid | SW8270C | EAST LDU | 2209441-004C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | WEST LDU | 2209441-005C | ND | 20 | µg/L | R | LR-SUR |
| Beryllium, Dissolved | E 200.7 | EAST LDU | 2209441-004E | 0.0020 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | WEST LDU | 2209441-005E | 0.0013 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | EAST LDU | 2209441-004D | 0.0014 | 0.0020 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Chrysene | SW8270C | EB-09-08-22 | 2209441-001c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | PW-3 | 2209441-002c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | PW-4 | 2209441-003c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | EAST LDU | 2209441-004c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | WEST LDU | 2209441-005c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | DUP 9-8-22 | 2209441-006c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Cobalt, Dissolved | E 200.7 | WEST LDU | 2209441-005E | 0.0031 | 0.0060 | mg/L | J | MDLRL |
| Ethylbenzene | SW8260B | WEST LDU | 2209441-005a | 0.69 | 1.0 | µg/L | J | MDLRL |
| Fluorene | SW8270C | WEST LDU | 2209441-005c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | WEST LDU | 2209441-005E | 0.00011 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | WEST LDU | 2209441-005D | 0.00054 | 0.00050 | mg/L | JB | MBD |
| Lead, Total | E200.8 | PW-3 | 2209441-002D | 0.00007 | 0.00050 | mg/L | U | MBD, MDLRL |
| Lead, Total | E200.8 | DUP 9-8-22 | 2209441-006D | 0.00013 | 0.00050 | mg/L | U | MBD, MDLRL |
| Mercury, Dissolved | E245.1 | PW-3 | 2209441-002E | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | PW-4 | 2209441-003E | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EAST LDU | 2209441-004E | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | WEST LDU | 2209441-005E | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | DUP 9-8-22 | 2209441-006E | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-09-08-22 | 2209441-001E | 0.00012 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | EAST LDU | 2209441-004D | 0.00023 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | PW-3 | 2209441-002D | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | PW-4 | 2209441-003D | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | WEST LDU | 2209441-005D | 0.00019 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | DUP 9-8-22 | 2209441-006D | 0.00015 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | EB-09-08-22 | 2209441-001D | 0.00017 | 0.00020 | mg/L | J | MDLRL |
| Methylene Chloride | SW8260B | DUP 9-8-22 | 2209441-006a | 2.6 | 3.0 | µg/L | U | MDLRL, TBD |
| MTBE | SW8260B | EAST LDU | 2209441-004a | 0.94 | 1.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------------------------|
| Naphthalene | SW8270C | EAST LDU | 2209441-004c | 0.24 | 0.3 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | EAST LDU | 2209441-004a | 0.89 | 3.0 | µg/L | J | MDLRL |
| Phenol | SW8270C | EAST LDU | 2209441-004C | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | WEST LDU | 2209441-005C | ND | 20 | µg/L | R | LR-SUR |
| Pyrene | SW8270C | EB-09-08-22 | 2209441-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | PW-3 | 2209441-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | PW-4 | 2209441-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | WEST LDU | 2209441-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP 9-8-22 | 2209441-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | EAST LDU | 2209441-004c | 0.36 | 1.0 | µg/L | J | ERPD-LCS, MDLRL |
| sec-Butylbenzene | SW8260B | EAST LDU | 2209441-004a | 0.89 | 1.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | EAST LDU | 2209441-004E | 0.00045 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | WEST LDU | 2209441-005E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP 9-8-22 | 2209441-006E | 0.00071 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | PW-3 | 2209441-002D | 0.00077 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | PW-4 | 2209441-003E | 0.0037 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | PW-3 | 2209441-002D | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | EAST LDU | 2209441-004C | 3.3 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | WEST LDU | 2209441-005C | 3.0 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | EB-09-08-22 | 2209441-001C | 0.058 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | PW-3 | 2209441-002C | 0.058 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | PW-4 | 2209441-003C | 0.049 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | DUP 9-8-22 | 2209441-006C | 0.047 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | EAST LDU | 2209441-004a | 0.35 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | EAST LDU | 2209441-004C | 0.21 | 0.080 | mg/L | J | EBL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH ORO | SW8015 | EB-09-08-22 | 2209441-001C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | PW-3 | 2209441-002C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | PW-4 | 2209441-003C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | DUP 9-8-22 | 2209441-006C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | WEST LDU | 2209441-005C | 0.073 | 0.080 | mg/L | J | EBL, MDLRL |
| Vanadium, Dissolved | E 200.7 | PW-3 | 2209441-002E | 0.0024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | PW-4 | 2209441-003E | 0.0024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | EAST LDU | 2209441-004E | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | WEST LDU | 2209441-005E | 0.0052 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 9-8-22 | 2209441-006E | 0.0026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | WEST LDU | 2209441-005D | 0.032 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | PW-3 | 2209441-002E | 0.021 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | PW-4 | 2209441-003E | 0.042 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP 9-8-22 | 2209441-006E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-09-08-22 | 2209441-001E | 0.0067 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | PW-3 | 2209441-002D | 0.0087 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/09/2022 |
| Date Validated: 01/18/2023 | Sample End Date: 09/09/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Chemical Oxygen Demand (COD) by EPA Method 410.4 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Biochemical Oxygen Demand (BOD) by SM Method 5210B ▪ E. Coli by SM Method 9223B | |
| Laboratory Project ID: 2209478 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.





Tier II Data Validation Report Summary

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-9-9-22 | 2209478-001 |
| STP-1 to EP-2 | 2209478-002 |
| EP-2 | 2209478-003 |
| FB-9-9-22 | 2209478-004 |
| DUP 9-9-22 | 2209478-005 |
| Trip Blank | 2209478-006 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 279 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: The recovery for chrysene was low in the LCS/LCSD. This compound is reported in both the 8270 SIM method and the standard 8270 method and is non-detect.

The recovery for 1,4-dioxane was low in the LCSD.

Method 8015D DRO: The LCS/LCSD had elevated recoveries.

Method 5210B: For sample EP-2, the RPD between bottles was greater than 30%.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

E – Estimated value. **Multiple analytes were flagged by the laboratory with the E flag for samples EB-9-9-22, STP-1 to EP-2, EP-2, and DUP 9-9-22. These results were assigned J qualifiers if detected and non-detections were assigned UJ due to this non-conformance. Note that the BOD result for sample STP-1 to EP-2 was reported as >67.56 mg/L in the laboratory report; however, the result could not be reported as >67.56 mg/L in Project Direct due to limitations of the data management system.**

H – Holding times for preparation or analysis exceeded

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD outside of range.

R – RPD between bottles >30%. **This laboratory flag was applied to the BOD result for sample EP-2. This result was assigned a J qualifier to indicate an estimated result due to evidence of poor precision.**

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|-----------|---------------------------------|------------|-----------------|
| 8270C | STP-1 to EP-2, EP-2, DUP 9-9-22 | SVOC | 10 |
| 8270C SIM | STP-1 to EP-2, EP-2, DUP 9-9-22 | SVOC | 10 |
| 9223B | STP-1 to EP-2, EP-2, DUP 9-9-22 | E. Coli | 10 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between -0.5°C and 5.8°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.4°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$), milligrams per liter (mg/L), and most probable number per 100 milliliters (MPN/ 100mL), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|----------------|-------|---------------|
| 200.7 | Total Barium | 70092 | 0.0018 mg/L |
| 200.8 | Total Antimony | 70092 | 0.00063 mg/L |
| 200.8 | Total Lead | 70092 | 0.00040 mg/L |
| 8015D | TPH DRO | 70105 | 0.052 mg/L |

Detections of total lead and TPH DRO in the associated samples that were less than the blank results and less than the applicable reporting limits were assigned U qualifiers. Detections of total antimony and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 70092 | Not Prepared |
| 200.7 | Dissolved Metals | B91139 | EB-9-9-22 |
| 200.8 | Total Metals | 70092 | DUP 9-9-22 |
| 200.8 | Dissolved Metals | B91030 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 70232 | EP-2 |
| 410.4 | COD | WG1931912 | Not Associated |
| 504.1 | EDB | 70173 | Not Prepared |
| 4500CN E | Cyanide | WG1925290 | Not Associated |
| 4500CN E | Cyanide | WG1928505 | Not Associated |
| 5210B | BOD | 70067 | Not Prepared |
| 8015D | TPH DRO and MRO | 70105 | Not Prepared |
| 8015D | TPH GRO | A91113 | Not Prepared |
| 8015D | TPH GRO | B91113 | DUP 9-9-22 |
| 8260B | VOCs | R90977 | Not Prepared |
| 8270C SIM | SVOCs | 70094 | Not Prepared |
| 8270C | SVOCs | 70094 | Not Prepared |
| 9223B | E.Coli | 70088 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Dissolved Barium | B91139 | 135% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Antimony | 70092 | 144% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70105 | 81.4% | 120% | 31.7-75.4% | 38.5% | 20% |
| 8270C | Pyrene | 70094 | Acceptable | Acceptable | 61-123% | 32.8% | 11.8% |
| 8270C SIM | 1,4-Dioxane | 70094 | Acceptable | 20.0% | 20.2-48.4% | Acceptable | 30.1% |
| 8270C SIM | Chrysene | 70094 | 51.0% | 48.0% | 55.3-115% | Acceptable | 20.0% |
| 5210B | BOD | 70067 | 84.3% | ----- | 84.6-115.4% | ----- | ----- |

The target analytes dissolved barium and total antimony were detected in associated samples, and the results were qualified as J+ based on the evidence of potential high bias. Non-detections of these analytes in the associated samples did not require qualification based on the evidence of potential high bias.

The analytes with LCS/LCSD RPD values that exceeded the QC limit were assigned J qualifiers for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

The target analytes 1,4-dioxane, chrysene, and BOD were not detected in associated samples, and the results were qualified as UJ based on the evidence of potential low bias. Detections of BOD in the associated samples EP-2 and DUP 9-9-22 were qualified as J- due to the evidence of potential low bias.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of sample EB-9-9-22, and qualification of sample data was not required.

The SVOC results for samples STP-1 to EP-2, EP-2, and DUP 9-9-22 were not qualified based on the surrogate non-conformances in the Method 8270C and Method 8270C SIM analyses since the applied dilution of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.



VALIDATION CRITERIA CHECKLIST

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-9-9-22, and one equipment blank sample, EB-9-9-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|--------------------|---------------|
| Trip Blank | 8260B | Acetone | 6.9 µg/L |
| EB-9-9-22 | 200.7 | Dissolved Vanadium | 0.0019 mg/L |
| EB-9-9-22 | 200.7 | Dissolved Zinc | 0.0065 mg/L |
| EB-9-9-22 | 245.1 | Dissolved Mercury | 0.00018 mg/L |
| EB-9-9-22 | 245.1 | Total Mercury | 0.00019 mg/L |
| EB-9-9-22 | 410.4 | COD | 44.7 mg/L |
| EB-9-9-22 | 8015D | TPH DRO | 0.043 mg/L |
| EB-9-9-22 | 8260B | Acetone | 8.70 µg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of the identified analytes in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 70105 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP 9-9-22 was collected as a field duplicate of sample STP-1 to EP-2.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for dissolved zinc exceeded the data validation limit of 30% at 51.0%. The dissolved zinc results for samples STP-1 to EP-2 and DUP 9-9-22 were assigned J qualifiers due to evidence of poor precision.

An RPD value could not be calculated for BOD for the field duplicate pair STP-1 to EP-2 and DUP 9-9-22 since the analyte was detected in the duplicate sample and the concentration was uncertain in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, BOD was qualified as J for both the duplicate and parent samples.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for these analyses, and the laboratory duplicate sample sources are summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 410.4 | COD | WG1931912 | EB 9-9-22, Not Associated |
| 4500CN E | Cyanide | WG1925290 | Not Associated |
| 4500CN E | Cyanide | WG1928505 | EP-2, Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPDs for laboratory duplicates prepared from project samples were within laboratory acceptance limits or were not applicable since the results for one or both measurements were within 5 times the reporting limit.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: The target analyte chrysene was reported by both Method 8270C and Method 8270C SIM. This analyte was reported as not detected by both methods.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| STP-1 to EP-2 | Antimony | ND | 0.00065 |
| DUP 9-9-22 | Antimony | ND | 0.00058 |
| EP-2 | Nickel | 0.037 | 0.038 |
| EP-2 | Selenium | 0.0011 | 0.0016 |
| STP-1 to EP-2 | Silver | 0.0022 | 0.0051 |
| EP-2 | Silver | 0.0042 | 0.010 |
| DUP 9-9-22 | Silver | 0.0020 | 0.0055 |
| EB-9-9-22 | Vanadium | ND | 0.0019 |
| STP-1 to EP-2 | Vanadium | ND | 0.0043 |
| EP-2 | Vanadium | ND | 0.0068 |
| DUP 9-9-22 | Vanadium | ND | 0.0037 |
| EB-9-9-22 | Zinc | ND | 0.0065 |
| STP-1 to EP-2 | Zinc | 0.022 | 0.032 |
| EP-2 | Zinc | ND | 0.0059 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: STP-1 to EP-2
Field Duplicate Sample ID: DUP 9-9-22 | | | | |
|---|------------------|-----------------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.024 mg/L | 0.025 mg/L | 4.1% |
| Barium, Total | E 200.7 | 0.032 mg/L | 0.03 mg/L | 6.5% |
| Cobalt, Total | E 200.7 | 0.013 mg/L | 0.012 mg/L | 8.0% |
| Silver, Dissolved | E 200.7 | 0.0051 mg/L | 0.0055 mg/L | 7.5% +/-RL |
| Silver, Total | E 200.7 | 0.0022 mg/L | 0.0020 mg/L | 9.5% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0043 mg/L | 0.0037 mg/L | 15.0% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.032 mg/L | 0.019 mg/L | 51.0% |
| Zinc, Total | E 200.7 | 0.022 mg/L | 0.025 mg/L | 12.8% |
| Antimony, Dissolved | E200.8 | 0.00065 mg/L | 0.00058 mg/L | 11.4% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0021 mg/L | 0.0023 mg/L | 9.1% |
| Arsenic, Total | E200.8 | 0.0025 mg/L | 0.0025 mg/L | 0.0% |
| Lead, Total | E200.8 | 0.00015 mg/L | 0.00016 mg/L | 6.5% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0011 mg/L | 0.0013 mg/L | 16.7% +/-RL |
| Selenium, Total | E200.8 | 0.0011 mg/L | 0.0018 mg/L | 48.3% +/-RL |
| Mercury, Dissolved | E245.1 | 0.00018 mg/L | 0.00018 mg/L | 0.0% +/-RL |
| Mercury, Total | E245.1 | 0.00022 mg/L | 0.00024 mg/L | 8.7% +/-RL |
| COD | 410.4 | 190 mg/L | 181 mg/L | 4.9% |
| BOD | SM 5210 B | >67.56 (2.0 mg/L) | 47 mg/L | DL |
| TPH DRO | SW8015 | 0.18 mg/L | 0.20 mg/L | 10.5% |
| TPH ORO | SW8015 | 0.11 mg/L | 0.13 mg/L | 16.7% +/-RL |
| Acetone | SW8260B | 8.7 µg/L | 7.0 µg/L | 21.7% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for dissolved zinc exceeded the data validation limit of 30% at 51.0%, which was evidence of poor precision. The dissolved zinc results were qualified as J for samples STP-1 to EP-2 and DUP 9-9-22.</p> <p>An RPD value could not be calculated for BOD for the field duplicate pair STP-1 to EP-2 and DUP 9-9-22 since the analyte was detected in the duplicate sample and the concentration was uncertain in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, BOD was qualified as J for both the duplicate and parent samples.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| EBL | Flagged as estimated by the laboratory. |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| OTHER | Other |
| TBD | Trip blank detection |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | EB-9-9-22 | 2209478-001c | ND | 1.0 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | STP-1 to EP-2 | 2209478-002c | ND | 10 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | EP-2 | 2209478-003c | ND | 10 | µg/L | UJ | EBL, LR-LCS |
| 1,4-Dioxane | SW8270C | DUP 9-9-22 | 2209478-005c | ND | 10 | µg/L | UJ | EBL, LR-LCS |
| Acetone | SW8260B | EP-2 | 2209478-003a | 15 | 10 | µg/L | JB | TBD |
| Acetone | SW8260B | Trip Blank | 2209478-006a | 6.9 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-9-9-22 | 2209478-001a | 8.7 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | STP-1 to EP-2 | 2209478-002a | 8.7 | 10 | µg/L | U | MDLRL, TBD |
| Acetone | SW8260B | DUP 9-9-22 | 2209478-005a | 7.0 | 10 | µg/L | U | MDLRL, TBD |
| Antimony, Dissolved | E200.8 | STP-1 to EP-2 | 2209478-002E | 0.00065 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | DUP 9-9-22 | 2209478-005E | 0.00058 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|----------------------|
| Antimony, Total | E200.8 | EP-2 | 2209478-003D | 0.0018 | 0.0010 | mg/L | JB | HR-LCS, MBD |
| Barium, Dissolved | E 200.7 | STP-1 to EP-2 | 2209478-002E | 0.024 | 0.0020 | mg/L | J+ | HR-LCS |
| Barium, Dissolved | E 200.7 | EP-2 | 2209478-003E | 0.14 | 0.0020 | mg/L | J+ | HR-LCS |
| Barium, Dissolved | E 200.7 | DUP 9-9-22 | 2209478-005E | 0.025 | 0.0020 | mg/L | J+ | HR-LCS |
| BOD | 5210 B | EB-9-9-22 | 2209478-001H | ND | 2.0 | mg/L | UJ | LR-LCS |
| BOD | 5210 B | EP-2 | 2209478-003H | 46 | 2.0 | mg/L | J- | OTHER, LR-LCS |
| BOD | 5210 B | DUP 9-9-22 | 2209478-005H | 47 | 2.0 | mg/L | J- | ERPD-FD, LR-LCS |
| BOD | 5210 B | STP-1 to EP-2 | 2209478-002H | >67.56 | 2.0 | mg/L | J- | EBL, ERPD-FD, LR-LCS |
| Carbon Disulfide | SW8260B | EP-2 | 2209478-003a | 2.2 | 10 | µg/L | J | MDLRL |
| COD | 410.4 | STP-1 to EP-2 | 2209478-002I | 190 | 20 | mg/L | JB | EBD |
| COD | 410.4 | DUP 9-9-22 | 2209478-005I | 181 | 20 | mg/L | JB | EBD |
| Chrysene | SW8270C | EB-9-9-22 | 2209478-001c | ND | 0.30 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | STP-1 to EP-2 | 2209478-002c | ND | 3.0 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | EP-2 | 2209478-003c | ND | 3.0 | µg/L | UJ | EBL, LR-LCS |
| Chrysene | SW8270C | DUP 9-9-22 | 2209478-005c | ND | 3.0 | µg/L | UJ | EBL, LR-LCS |
| Lead, Total | E200.8 | STP-1 to EP-2 | 2209478-002D | 0.00015 | 0.00050 | mg/L | U | MBD, MDLRL |
| Lead, Total | E200.8 | DUP 9-9-22 | 2209478-005D | 0.00016 | 0.00050 | mg/L | U | MBD, MDLRL |
| Mercury, Dissolved | E245.1 | STP-1 to EP-2 | 2209478-002E | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EP-2 | 2209478-003E | 0.00015 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | DUP 9-9-22 | 2209478-005E | 0.00018 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-9-9-22 | 2209478-001E | 0.00018 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | STP-1 to EP-2 | 2209478-002D | 0.00022 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | DUP 9-9-22 | 2209478-005D | 0.00024 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | EP-2 | 2209478-003D | 0.00015 | 0.00020 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------------------------|
| Mercury, Total | E245.1 | EB-9-9-22 | 2209478-001D | 0.00019 | 0.00020 | mg/L | J | MDLRL |
| Pyrene | SW8270C | EB-9-9-22 | 2209478-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | STP-1 to EP-2 | 2209478-002c | ND | 10 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | EP-2 | 2209478-003c | ND | 10 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP 9-9-22 | 2209478-005c | ND | 10 | µg/L | UJ | ERPD-LCS |
| Silver, Total | E 200.7 | STP-1 to EP-2 | 2209478-002D | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | EP-2 | 2209478-003D | 0.0042 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | DUP 9-9-22 | 2209478-005D | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | STP-1 to EP-2 | 2209478-002C | 0.18 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | EP-2 | 2209478-003C | 0.28 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | DUP 9-9-22 | 2209478-005C | 0.20 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | EB-9-9-22 | 2209478-001C | 0.043 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | EP-2 | 2209478-003a | 0.0094 | 0.050 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | STP-1 to EP-2 | 2209478-002C | 0.11 | 0.080 | mg/L | J | EBL |
| TPH ORO | SW8015 | EP-2 | 2209478-003C | 0.11 | 0.080 | mg/L | J | EBL |
| TPH ORO | SW8015 | DUP 9-9-22 | 2209478-005C | 0.13 | 0.080 | mg/L | J | EBL |
| TPH ORO | SW8015 | EB-9-9-22 | 2209478-001C | ND | 0.080 | mg/L | UJ | EBL |
| Vanadium, Dissolved | E 200.7 | STP-1 to EP-2 | 2209478-002E | 0.0043 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EP-2 | 2209478-003E | 0.0068 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 9-9-22 | 2209478-005E | 0.0037 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-9-9-22 | 2209478-001E | 0.0019 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | STP-1 to EP-2 | 2209478-002E | 0.032 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | DUP 9-9-22 | 2209478-005E | 0.019 | 0.010 | mg/L | JB | EBD, ERPD-FD |
| Zinc, Dissolved | E 200.7 | EP-2 | 2209478-003E | 0.0059 | 0.010 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Dissolved | E 200.7 | EB-9-9-22 | 2209478-001E | 0.0065 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/13/2022 |
| Date Validated: 01/23/2023 | Sample End Date: 09/13/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209635 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-13-22 | 2209635-001 |
| MKTF-46 | 2209635-002 |
| MKTF-18R | 2209635-003 |
| MKTF-38 | 2209635-004 |
| MKTF-40 | 2209635-005 |
| MKTF-31 | 2209635-006 |
| FB 9-13-22 | 2209635-007 |
| DUP-9-13-22 | 2209635-008 |
| Trip Blank | 2209635-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Identified Issues (Item 1)
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

| 1. Was the report free of non-conformances identified by the laboratory? | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|----------------------------|-----------------|------------|-----------------|-------|---------|-------------|---|-------|----------|----------------------------|---|-------|----------|-------------|----|-------|----------|---------|----|-------|---------|------|----|-------|----------|---------|-----|
| <p>Comments: The laboratory noted the following analytical non-conformances related to this data set.</p> <p><u>Method 8270C and Method 8270C SIM</u>: Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample MKTF-18R.</p> <p>For sample MKTF-31, the analyte 1,4 dioxane is E flagged because the result is above the calibration range of the curve.</p> <p>The target analyte 1,4-dioxane that was flagged by the laboratory with the E flag for sample MKTF-31 was assigned a J qualifiers to indicate an estimated concentration.</p> <p><u>Method 8015D DRO</u>: The LCS had slightly elevated recovery. The LCSD had acceptable recoveries.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The laboratory used the following data qualification flags with this data set.</p> <p>E – Estimated value. TPH DRO and TPH MRO were flagged by the laboratory with the E flag in multiple samples. These results were assigned J qualifiers if detected, and non-detections were assigned UJ due to this laboratory identified non-conformance.</p> <p>J – Analyte detected below quantitation limits.</p> <p>J – The identification of the analyte is acceptable; the reported value is an estimate.</p> <p>R – % RPD outside of range.</p> <p>S – % Recovery outside of range due to dilution or matrix interference.</p> <p>* – Value exceeds maximum contaminant level.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3. Were sample CoC forms and custody procedures complete? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Comments: The detection limits appeared to be acceptable. The following dilutions were applied.</p> <table border="1"> <thead> <tr> <th>Method</th> <th>Sample(s)</th> <th>Analyte(s)</th> <th>Dilution Factor</th> </tr> </thead> <tbody> <tr> <td>8260B</td> <td>MKTF-31</td> <td>Select VOCs</td> <td>2</td> </tr> <tr> <td>200.7</td> <td>MKTF-18R</td> <td>Total and Dissolved Barium</td> <td>5</td> </tr> <tr> <td>8260B</td> <td>MKTF-18R</td> <td>Select VOCs</td> <td>10</td> </tr> <tr> <td>8015D</td> <td>MKTF-18R</td> <td>TPH GRO</td> <td>20</td> </tr> <tr> <td>8260B</td> <td>MKTF-31</td> <td>MTBE</td> <td>20</td> </tr> <tr> <td>8260B</td> <td>MKTF-18R</td> <td>Benzene</td> <td>100</td> </tr> </tbody> </table> | | Method | Sample(s) | Analyte(s) | Dilution Factor | 8260B | MKTF-31 | Select VOCs | 2 | 200.7 | MKTF-18R | Total and Dissolved Barium | 5 | 8260B | MKTF-18R | Select VOCs | 10 | 8015D | MKTF-18R | TPH GRO | 20 | 8260B | MKTF-31 | MTBE | 20 | 8260B | MKTF-18R | Benzene | 100 |
| Method | Sample(s) | Analyte(s) | Dilution Factor | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8260B | MKTF-31 | Select VOCs | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 200.7 | MKTF-18R | Total and Dissolved Barium | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8260B | MKTF-18R | Select VOCs | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8015D | MKTF-18R | TPH GRO | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8260B | MKTF-31 | MTBE | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8260B | MKTF-18R | Benzene | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.4°C and 4.7°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.1°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|-----------------------------|-------|---------------|
| 200.7 | Total Zinc | 70179 | 0.0056 mg/L |
| 245.1 | Total and Dissolved Mercury | 70278 | 0.00012 mg/L |
| 8015D | TPH DRO | 70190 | 0.030 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total zinc and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 70179 | Not Prepared |
| 200.7 | Dissolved Metals | C91139 | EB-09-13-22 |
| 200.8 | Total Metals | 70179 | DUP-9-13-22 |
| 200.8 | Dissolved Metals | C91078 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 70278 | Not Prepared |
| 504.1 | EDB | 70173 | EB-09-13-22 |
| 4500CN E | Cyanide | WG1928511 | Not Associated |
| 8015D | TPH DRO and MRO | 70190 | Not Prepared |
| 8015D | TPH GRO | A91113 | MKTF-46 |
| 8260B | VOCs | R91021 | Not Prepared |
| 8260B | VOCs | R91060 | Not Prepared |
| 8260B | VOCs | R91090 | Not Prepared |
| 8270C SIM | SVOCs | 70174 | Not Prepared |
| 8270C | SVOCs | 70174 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|--------|--------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.8 | Dissolved Selenium | C91078 | 62.2% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 70190 | 89.3% | Acceptable | 31.7-75.4% | 25.3% | 20% |

Detections of dissolved selenium in the associated samples were qualified as J-, and non-detections of this analyte were qualified as UJ due to the evidence of potential low bias.

TPH DRO was detected in the associated samples. These results were qualified as J due to evidence of poor precision and as J+ due to the evidence of high bias.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

The recovery of the surrogate BFB for sample MKTF-38 was outside the laboratory acceptance range of 70-130% at 162%. TPH GRO was detected in the Method 8015D analysis of samples MKTF-38, and this result was qualified as J+ to indicate a potential high bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of samples MKTF-46, MKTF-18R, MKTF-38, MKTF-40, MKTF-31, and DUP-9-13-22 or the Method 8270C analysis of sample MKTF-40, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-13-22, and one equipment blank sample, EB-09-13-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|------------------|-----------------------|----------------------|
| FB 9-13-22 | 8260B | 2-Butanone | 12 µg/L |
| FB 9-13-22 | 8260B | Acetone | 16 µg/L |
| EB-09-13-22 | 8260B | 2-Butanone | 11 µg/L |
| EB-09-13-22 | 8260B | Acetone | 14 µg/L |
| EB-09-13-22 | 8270C SIM | 1,4-Dioxane | 0.16 µg/L |
| EB-09-13-22 | 8015D | TPH DRO | 0.030 mg/L |
| EB-09-13-22 | 200.7 | Dissolved Zinc | 0.0064 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of acetone and dissolved zinc in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The TPH DRO results for the samples in batch 70190 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-13-22 was collected as a field duplicate of sample MKTF-46.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD values for 1,4-dioxane and total cobalt exceeded the data validation limit of 30% at 72.7% and 40.7%, respectively, which was evidence of poor precision. The 1,4-dioxane and total cobalt results were qualified as J for samples MKTF-46 and DUP 9-13-22.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1928511 from a sample not associated with this data set.

The RPD value for the laboratory duplicate samples prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)?

N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results?

No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results. The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-18R | Arsenic | 0.0072 | 0.0073 |
| MKTF-46 | Beryllium | ND | 0.00097 |
| MKTF-38 | Nickel | ND | 0.0040 |
| MKTF-40 | Nickel | 0.0059 | 0.0088 |
| MKTF-46 | Silver | ND | 0.0039 |
| MKTF-18R | Silver | ND | 0.0015 |
| MKTF-38 | Silver | ND | 0.0040 |
| MKTF-40 | Silver | ND | 0.0066 |
| NKTF-31 | Silver | ND | 0.0020 |
| DUP-9-13-22 | Silver | ND | 0.0036 |
| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
| MKTF-46 | Vanadium | 0.0043 | 0.0056 |
| DUP-9-13-22 | Vanadium | 0.0038 | 0.0050 |
| EB-09-13-22 | Zinc | ND | 0.0064 |
| MKTF-46 | Zinc | 0.0072 | 0.0099 |
| MKTF-38 | Zinc | 0.013 | 0.015 |
| MKTF-31 | Zinc | 0.0071 | 0.010 |
| DUP-9-13-22 | Zinc | ND | 0.013 |



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-46
Field Duplicate Sample ID: DUP-9-13-22 | | | | |
|--|----------------|-------------------|--------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.037 mg/L | 0.036 mg/L | 2.70% |
| Barium, Total | E 200.7 | 0.068 mg/L | 0.075 mg/L | 9.80% |
| Beryllium, Dissolved | E 200.7 | 0.00097 mg/L | ND (0.0020 mg/L) | DL |
| Cobalt, Total | E 200.7 | 0.013 mg/L | 0.0086 mg/L | 40.7% |
| Silver, Dissolved | E 200.7 | 0.0039 mg/L | 0.0036 mg/L | 8.0% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0056 mg/L | 0.0050 mg/L | 11.3% +/-RL |
| Vanadium, Total | E 200.7 | 0.0043 mg/L | 0.0038 mg/L | 12.3% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0099 mg/L | 0.013 mg/L | 27.1% +/-RL |
| Zinc, Total | E 200.7 | 0.0072 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00077 mg/L | 0.00081 mg/L | 5.1% +/-RL |
| Arsenic, Total | E200.8 | 0.00082 mg/L | 0.00081 mg/L | 1.2% +/-RL |
| Lead, Total | E200.8 | 0.00073 mg/L | 0.00083 mg/L | 12.8% +/-RL |
| Selenium, Total | E200.8 | 0.00040 mg/L | 0.00063 mg/L | 44.7% +/-RL |
| Mercury, Total | E245.1 | 0.00010 mg/L | 0.00011 mg/L | 9.5% +/-RL |
| Cyanide, Total | E335.4 | ND (5.0 µg/L) | 3.06 µg/L | DL |
| TPH DRO | SW8015 | 0.068 mg/L | 0.058 mg/L | 15.9% +/-RL |
| TPH GRO | SW8015 | 0.025 mg/L | 0.021 mg/L | 17.4% +/-RL |
| Acetone | SW8260B | 6.4 µg/L | 8.1 µg/L | 23.4% +/-RL |
| Chlorobenzene | SW8260B | 0.29 µg/L | 0.33 µg/L | 12.9% +/-RL |
| sec-Butylbenzene | SW8260B | 0.18 µg/L | ND (1.0 µg/L) | DL |
| Di-n-butylphthalate | SW8270C | 15 µg/L | ND (10 µg/L) | DL |
| Pyrene | SW8270C | 0.40 µg/L | ND (1.0 µg/L) | DL |
| 1,4-Dioxane | SW8270C | 0.98 µg/L | 2.1 µg/L | 72.7% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD values for 1,4-dioxane and total cobalt exceeded the data validation limit of 30% at 72.7% and 40.7%, respectively, which was evidence of poor precision. The 1,4-dioxane and total cobalt results were qualified as J for samples MKTF-46 and DUP 9-13-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| EBL | Flagged as estimated by the laboratory. |
| ECAL | The result exceeds the calibration range. |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| FBD | Field blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|---------------------|
| 1,1,1-Trichloroethane | SW8260B | MKTF-31 | 2209635-006a | 1.7 | 2.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | MKTF-40 | 2209635-005a | 0.96 | 1.0 | µg/L | J | MDLRL |
| 1,2-Dibromoethane | E504.1 | MKTF-31 | 2209635-006B | 0.0057 | 0.0093 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | DUP-9-13-22 | 2209635-008c | 2.1 | 1.0 | µg/L | J | ERPD-FD |
| 1,4-Dioxane | SW8270C | MKTF-46 | 2209635-002c | 0.98 | 1.0 | µg/L | U | EBD, ERPD-FD, MDLRL |
| 1,4-Dioxane | SW8270C | EB-09-13-22 | 2209635-001c | 0.16 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-31 | 2209635-006c | 75 | 1.0 | µg/L | J | ECAL |
| 2-Butanone | SW8260B | EB-09-13-22 | 2209635-001a | 11 | 10 | µg/L | U | FBD |
| 3,4-Methylphenol | SW8270C | MKTF-18R | 2209635-003C | 5.9 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | MKTF-38 | 2209635-004a | 19 | 10 | µg/L | JB | FBD |
| Acetone | SW8260B | EB-09-13-22 | 2209635-001a | 14 | 10 | µg/L | U | FBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Acetone | SW8260B | MKTF-46 | 2209635-002a | 6.4 | 10 | µg/L | U | FBD, MDLRL |
| Acetone | SW8260B | DUP-9-13-22 | 2209635-008a | 8.1 | 10 | µg/L | U | FBD, MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-46 | 2209635-002E | 0.00077 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-40 | 2209635-005E | 0.00066 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-31 | 2209635-006E | 0.00070 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-9-13-22 | 2209635-008E | 0.00081 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-46 | 2209635-002D | 0.00082 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-9-13-22 | 2209635-008D | 0.00081 | 0.0010 | mg/L | J | MDLRL |
| Benzo(a)anthracene | SW8270C | MKTF-18R | 2209635-003c | 0.18 | 0.30 | µg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | MKTF-46 | 2209635-002E | 0.00097 | 0.0020 | mg/L | J | MDLRL |
| Chlorobenzene | SW8260B | MKTF-46 | 2209635-002a | 0.29 | 1.0 | µg/L | J | MDLRL |
| Chlorobenzene | SW8260B | DUP-9-13-22 | 2209635-008a | 0.33 | 1.0 | µg/L | J | MDLRL |
| Chloromethane | SW8260B | MKTF-38 | 2209635-004a | 1.8 | 3.0 | µg/L | J | MDLRL |
| cis-1,2-Dichloroethene | SW8260B | MKTF-18R | 2209635-003a | 8.7 | 10 | µg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-46 | 2209635-002D | 0.013 | 0.0060 | mg/L | J | ERPD-FD |
| Cobalt, Total | E 200.7 | DUP-9-13-22 | 2209635-008D | 0.0086 | 0.0060 | mg/L | J | ERPD-FD |
| Cyanide, Total | E335.4 | DUP-9-13-22 | 2209635-008F | 3.06 | 5.0 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | MKTF-18R | 2209635-003c | 0.28 | 0.30 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-18R | 2209635-003a | 3.7 | 10 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-38 | 2209635-004E | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-31 | 2209635-006E | 0.000082 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | MKTF-46 | 2209635-002D | 0.00010 | 0.00020 | mg/L | U | MBD, MDLRL |
| Mercury, Total | E245.1 | DUP-9-13-22 | 2209635-008D | 0.00011 | 0.00020 | mg/L | U | MBD, MDLRL |
| MTBE | SW8260B | MKTF-40 | 2209635-005a | 0.73 | 1.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-18R | 2209635-003a | 3.3 | 30 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-38 | 2209635-004a | 1.2 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-18R | 2209635-003E | 0.0041 | 0.010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Nickel, Dissolved | E 200.7 | MKTF-38 | 2209635-004E | 0.0040 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-40 | 2209635-005E | 0.0088 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-31 | 2209635-006E | 0.0039 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-18R | 2209635-003D | 0.0074 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-40 | 2209635-005D | 0.0059 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-31 | 2209635-006D | 0.0099 | 0.010 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-18R | 2209635-003a | 4.9 | 10 | µg/L | J | MDLRL |
| Phenanthrene | SW8270C | MKTF-38 | 2209635-004c | 0.16 | 0.30 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | MKTF-18R | 2209635-003a | 2.3 | 10 | µg/L | J | MDLRL |
| Pyrene | SW8270C | MKTF-46 | 2209635-002c | 0.40 | 1.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | MKTF-18R | 2209635-003c | 0.64 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-46 | 2209635-002a | 0.18 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-18R | 2209635-003a | 2.2 | 10 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | EB-09-13-22 | 2209635-001E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-46 | 2209635-002E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-18R | 2209635-003E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | DUP-9-13-22 | 2209635-008E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-38 | 2209635-004E | 0.00075 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-40 | 2209635-005E | 0.00039 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-31 | 2209635-006E | 0.00051 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Total | E200.8 | MKTF-46 | 2209635-002D | 0.00040 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-18R | 2209635-003D | 0.00046 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-40 | 2209635-005D | 0.00088 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | DUP-9-13-22 | 2209635-008D | 0.00063 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-46 | 2209635-002E | 0.0039 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-18R | 2209635-003E | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-38 | 2209635-004E | 0.0040 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------------------------|
| Silver, Dissolved | E 200.7 | MKTF-31 | 2209635-006E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP-9-13-22 | 2209635-008E | 0.0036 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | EB-09-13-22 | 2209635-001C | 0.030 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-40 | 2209635-005C | 0.050 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | DUP-9-13-22 | 2209635-008C | 0.058 | 0.064 | mg/L | U | EBL, ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-18R | 2209635-003C | 3.1 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | MKTF-38 | 2209635-004C | 0.73 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | MKTF-46 | 2209635-002C | 0.068 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-31 | 2209635-006C | 0.26 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH GRO | SW8015 | MKTF-38 | 2209635-004a | 0.35 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-46 | 2209635-002a | 0.025 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | DUP-9-13-22 | 2209635-008a | ND | 0.050 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | EB-09-13-22 | 2209635-001C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | MKTF-46 | 2209635-002C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | MKTF-18R | 2209635-003C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | MKTF-38 | 2209635-004C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | MKTF-40 | 2209635-005C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | MKTF-31 | 2209635-006C | ND | 0.080 | mg/L | UJ | EBL |
| TPH ORO | SW8015 | DUP-9-13-22 | 2209635-008C | ND | 0.080 | mg/L | UJ | EBL |
| Vanadium, Dissolved | E 200.7 | MKTF-46 | 2209635-002E | 0.0056 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-18R | 2209635-003E | 0.0017 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-38 | 2209635-004E | 0.0040 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-40 | 2209635-005E | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-31 | 2209635-006E | 0.0063 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-9-13-22 | 2209635-008E | 0.0050 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Total | E 200.7 | MKTF-46 | 2209635-002D | 0.0043 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-18R | 2209635-003D | 0.0089 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-38 | 2209635-004D | 0.023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-40 | 2209635-005D | 0.023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-31 | 2209635-006D | 0.032 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-9-13-22 | 2209635-008D | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-38 | 2209635-004E | 0.015 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-31 | 2209635-006E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-9-13-22 | 2209635-008E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-46 | 2209635-002E | 0.0099 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-18R | 2209635-003E | 0.0093 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-40 | 2209635-005E | 0.0077 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-09-13-22 | 2209635-001E | 0.0064 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-18R | 2209635-003D | 0.028 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | MKTF-38 | 2209635-004D | 0.013 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | MKTF-46 | 2209635-002D | 0.0072 | 0.010 | mg/L | U | MBD, MDLRL |
| Zinc, Total | E 200.7 | MKTF-40 | 2209635-005D | 0.0096 | 0.010 | mg/L | U | MBD, MDLRL |
| Zinc, Total | E 200.7 | MKTF-31 | 2209635-006D | 0.0071 | 0.010 | mg/L | U | MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 09/14/2022 |
| Date Validated: 01/18/2023 | Sample End Date: 09/14/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209730 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-14-22 | 2209730-001 |
| MKTF-27 | 2209730-002 |
| MKTF-28 | 2209730-003 |
| MKTF-29 | 2209730-004 |
| MKTF-30 | 2209730-005 |
| OPIS-1 | 2209730-006 |
| NAPI-2 | 2209730-007 |
| NAPI-3 | 2209730-008 |
| KA-3 | 2209730-009 |
| DUP 9-14-22 | 2209730-010 |
| FB 9-14-22 | 2209730-011 |
| Trip Blank | 2209730-012 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 810 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: Naphthalene and 1-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for sample NAPI-2.

Method 8015D DRO: The LCS had slightly elevated recoveries.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

E – The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). *This laboratory flag was applied only to QC sample results in the laboratory report, and qualification of sample data was not required.*

J – Analyte detected below quantitation limits.

S – % Recovery outside of range due to dilution or matrix interference.

V – The sample concentration is too high to evaluate accurate spike recoveries.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|-----------|-----------|----------------------------|-----------------|
| 8260B | NAPI-2 | Select VOCs | 2 |
| 200.7 | NAPI-2 | Dissolved Barium | 5 |
| 200.7 | NAPI-3 | Total and Dissolved Barium | 5 |
| 8015D | OPIS-1 | TPH GRO, DRO, and MRO | 5 |
| 8260B | OPIS-1 | VOCs | 5 |
| 200.7 | NAPI-2 | Total Barium | 10 |
| 8015D | NAPI-2 | TPH GRO | 10 |
| 8270C | OPIS-1 | SVOCs | 10 |
| 8270C SIM | OPIS-1 | SVOCs | 10 |
| 8260B | NAPI-2 | Benzene | 20 |

| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.4°C and 2.4°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.8°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 70201 at a concentration of 0.025 mg/L. Results greater than the blank detection and/or the laboratory reporting limit but less than 10 times the blank concentration were qualified with a JB flag. Detections of this analyte in the associated samples with results greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 70240 | Not Prepared |
| 200.7 | Dissolved Silver | A91392 | DUP 9-14-22 |
| 200.7 | Dissolved Metals | B91347 | Not Prepared |
| 200.7 | Dissolved Metals | C91347 | Not Prepared |
| 200.8 | Total Metals | 70240 | KA-3, DUP 9-14-22 |
| 200.8 | Dissolved Metals | C91078 | KA-3, DUP 9-14-22 |
| 245.1 | Total and Dissolved Mercury | 70279 | EB-09-14-22 |
| 504.1 | EDB | 70247 | Not Prepared |
| 4500CN E | Cyanide | WG1928522 | Not Associated |
| 4500CN E | Cyanide | WG1928523 | Not Associated, MKTF-27 |
| 8015D | TPH DRO and MRO | 70201 | Not Prepared |
| 8015D | TPH GRO | A91113 | Not Prepared |
| 8260B | VOCs | R91115 | Not Prepared |
| 8270C SIM | SVOCs | 70216 | Not Prepared |
| 8270C | SVOCs | 70216 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits |
|--------|--------------------|--------|--------------|---------------|--------------------|
| 200.7 | Dissolved Barium | B91347 | 68.2% | ----- | 70-130% |
| 200.7 | Dissolved Nickel | B91347 | 133% | ----- | 70-130% |
| 200.8 | Dissolved Selenium | C91078 | 62.2% | ----- | 70-130% |
| 8015D | TPH DRO | 70201 | 75.5% | Acceptable | 31.7-75.4% |

Detections of dissolved barium and dissolved selenium were qualified as J-, and non-detections of these analytes were qualified as UJ, due to the evidence of potential low bias.

Detections of dissolved nickel and TPH DRO were qualified as J+ due to the evidence of potential high bias. The non-detection of dissolved nickel in sample EB-09-14-22 did not require qualification due to this non-conformance.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

The recoveries of the surrogate BFB for samples NAPI-2, NAPI-3, and KA-3 were outside the laboratory acceptance range of 70-130% at 131%, 201%, and 147%, respectively. TPH GRO was detected in the Method 8015D analysis of samples NAPI-2, NAPI-3, KA-3, and these results were qualified as J+ to indicate a potential high bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C SIM analysis of samples MKTF-27, MKTF-28, MKTF-29, MKTF-30, NAPI-2, NAPI-3, KA-3, and DUP 9-14-22, and qualification of sample data was not required.

The SVOC results for sample OPIS-1 were not qualified based on the surrogate non-conformances in the Method 8270C and Method 8270C SIM analyses since the applied dilution of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-14-22, and one equipment blank sample, EB-9-14-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| FB 9-14-22 | 8260B | 2-Butanone | 12 µg/L |
| FB 9-14-22 | 8260B | Acetone | 59 µg/L |
| EB-9-14-22 | 200.7 | Dissolved Zinc | 0.0069 mg/L |
| EB-9-14-22 | 200.7 | Total Zinc | 0.0052 mg/L |
| EB-9-14-22 | 8015D | TPH DRO | 0.71 mg/L |
| EB-9-14-22 | 8015D | TPH MRO | 0.89 mg/L |

Detections of dissolved zinc, total zinc, and TPH MRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc, total zinc, and TPH MRO in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 70201 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP 9-14-22 was collected as a field duplicate of sample MKTF-27.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exception.

The RPD value for total cobalt exceeded the data validation limit of 30% at 30.8%, which was evidence of poor precision. The total cobalt results were qualified as J for samples MKTF-27 and DUP 9-14-22.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batches WG1928522 and WG1928523 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)?

N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results?

No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-28 | Antimony | ND | 0.00077 |
| MKTF-27 | Nickel | 0.029 | 0.032 |
| MKTF-28 | Nickel | ND | 0.0050 |
| MKTF-29 | Nickel | 0.015 | 0.018 |
| MKTF-30 | Nickel | 0.014 | 0.018 |
| KA-3 | Nickel | 0.020 | 0.022 |
| DUP 9-14-22 | Nickel | 0.029 | 0.033 |
| KA-3 | Selenium | 0.00080 | 0.0014 |
| MKTF-27 | Silver | ND | 0.0043 |
| MKTF-28 | Silver | ND | 0.0019 |
| MKTF-29 | Silver | 0.0026 | 0.0077 |
| MKTF-30 | Silver | ND | 0.0022 |
| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
| OPIS-1 | Silver | ND | 0.0025 |
| NAPI-2 | Silver | ND | 0.0026 |
| NAPI-3 | Silver | ND | 0.0028 |
| DUP 9-14-22 | Silver | ND | 0.0040 |
| EB-09-14-22 | Zinc | 0.0052 | 0.0069 |
| MKTF-27 | Zinc | 0.0040 | 0.011 |
| MKTF-28 | Zinc | 0.024 | 0.043 |
| MKTF-29 | Zinc | ND | 0.011 |
| MKTF-30 | Zinc | ND | 0.0090 |
| OPIS-1 | Zinc | 0.0068 | 0.023 |
| NAPI-2 | Zinc | ND | 0.0096 |
| NAPI-3 | Zinc | ND | 0.012 |
| KA-3 | Zinc | 0.0089 | 0.032 |
| DUP 9-14-22 | Zinc | ND | 0.010 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-27
Field Duplicate Sample ID: DUP 9-14-22 | | | | |
|---|----------------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.059 mg/L | 0.058 mg/L | 1.7% |
| Barium, Total | E 200.7 | 0.18 mg/L | 0.17 mg/L | 5.7% |
| Cobalt, Total | E 200.7 | 0.011 mg/L | 0.015 mg/L | 30.8% |
| Nickel, Dissolved | E 200.7 | 0.032 mg/L | 0.033 mg/L | 3.1% |
| Nickel, Total | E 200.7 | 0.029 mg/L | 0.029 mg/L | 0.0% |
| Silver, Dissolved | E 200.7 | 0.0043 mg/L | 0.0040 mg/L | 7.2% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0038 mg/L | 0.0048 mg/L | 23.3% +/-RL |
| Vanadium, Total | E 200.7 | 0.015 mg/L | 0.016 mg/L | 6.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | 0.010 mg/L | 9.5% +/-RL |
| Zinc, Total | E 200.7 | 0.0040 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00042 mg/L | 0.00049 mg/L | 15.4% +/-RL |
| Arsenic, Total | E200.8 | 0.0011 mg/L | 0.0013 mg/L | 16.7% +/-RL |
| Lead, Dissolved | E200.8 | 0.000093 mg/L | 0.000080 mg/L | 15.0% +/-RL |
| Lead, Total | E200.8 | 0.0032 mg/L | 0.0029 mg/L | 9.8% |
| Selenium, Dissolved | E200.8 | 0.00051 mg/L | 0.00094 mg/L | 59.3% +/-RL |
| Selenium, Total | E200.8 | 0.0011 mg/L | 0.0014 mg/L | 24.0% +/-RL |
| Cyanide, Total | E335.4 | 0.00799 mg/L | 0.00901 mg/L | 12.0% +/-RL |
| TPH DRO | SW8015 | 0.20 mg/L | 0.21 mg/L | 4.9% |
| TPH GRO | SW8015 | 0.030 mg/L | 0.032 mg/L | 6.5% +/-RL |
| TPH ORO | SW8015 | 0.068 mg/L | 0.061 mg/L | 10.9% +/-RL |
| 1,1-Dichloroethane | SW8260B | 1.6 µg/L | 1.6 µg/L | 0.0% +/-RL |
| MTBE | SW8260B | 33 µg/L | 33 µg/L | 0.0% |
| 1,4-Dioxane | SW8270C | 5.0 µg/L | 5.7 µg/L | 13.1% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for total cobalt exceeded the data validation limit of 30% at 30.8%, which was evidence of poor precision. The total cobalt results were qualified as J for samples MKTF-27 and DUP 9-14-22.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-29 | 2209730-004a | 0.90 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-28 | 2209730-003c | 0.36 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | NAPI-3 | 2209730-008c | 0.74 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | KA-3 | 2209730-009c | 0.48 | 1.0 | µg/L | J | MDLRL |
| Anthracene | SW8270C | NAPI-3 | 2209730-008c | 0.18 | 0.30 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-28 | 2209730-003E | 0.00077 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-27 | 2209730-002E | 0.00042 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-28 | 2209730-003E | 0.00093 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-29 | 2209730-004E | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-30 | 2209730-005E | 0.00060 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | KA-3 | 2209730-009E | 0.00067 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP 9-14-22 | 2209730-010E | 0.00049 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-29 | 2209730-004D | 0.00094 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | KA-3 | 2209730-009D | 0.00071 | 0.0010 | mg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | MKTF-27 | 2209730-002E | 0.059 | 0.0020 | mg/L | J- | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Barium, Dissolved | E 200.7 | MKTF-28 | 2209730-003E | 0.073 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | MKTF-29 | 2209730-004E | 0.20 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | MKTF-30 | 2209730-005E | 0.036 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.82 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | NAPI-2 | 2209730-007E | 4.9 | 0.010 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | NAPI-3 | 2209730-008E | 2.3 | 0.010 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | KA-3 | 2209730-009E | 0.21 | 0.0020 | mg/L | J- | LR-LCS |
| Barium, Dissolved | E 200.7 | EB-09-14-22 | 2209730-001E | ND | 0.0020 | mg/L | UJ | LR-LCS |
| Chromium, Total | E 200.7 | OPIS-1 | 2209730-006D | 0.0023 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.0048 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-27 | 2209730-002D | 0.011 | 0.0060 | mg/L | J | ERPD-FD |
| Cobalt, Total | E 200.7 | DUP 9-14-22 | 2209730-010D | 0.015 | 0.0060 | mg/L | J | ERPD-FD |
| Ethylbenzene | SW8260B | OPIS-1 | 2209730-006a | 4.6 | 5.0 | µg/L | J | MDLRL |
| Ethylbenzene | SW8260B | KA-3 | 2209730-009a | 0.31 | 1.0 | µg/L | J | MDLRL |
| Fluorene | SW8270C | NAPI-3 | 2209730-008c | 0.24 | 0.30 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-27 | 2209730-002E | 0.000093 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-28 | 2209730-003E | 0.00014 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-30 | 2209730-005E | 0.000098 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | NAPI-2 | 2209730-007E | 0.00032 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | KA-3 | 2209730-009E | 0.00021 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP 9-14-22 | 2209730-010E | 0.00008 | 0.00050 | mg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | NAPI-2 | 2209730-007a | 1.2 | 6.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-27 | 2209730-002E | 0.032 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | MKTF-29 | 2209730-004E | 0.018 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | MKTF-30 | 2209730-005E | 0.018 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.17 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | NAPI-2 | 2209730-007E | 0.068 | 0.010 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Nickel, Dissolved | E 200.7 | NAPI-3 | 2209730-008E | 0.022 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | KA-3 | 2209730-009E | 0.022 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | MKTF-28 | 2209730-003E | 0.005 | 0.010 | mg/L | J+ | HR-LCS, MDLRL |
| sec-Butylbenzene | SW8260B | NAPI-3 | 2209730-008a | 0.73 | 1.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | OPIS-1 | 2209730-006E | 0.0012 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Dissolved | E200.8 | KA-3 | 2209730-009E | 0.0014 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Dissolved | E200.8 | EB-09-14-22 | 2209730-001E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-29 | 2209730-004E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-30 | 2209730-005E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | NAPI-3 | 2209730-008E | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Dissolved | E200.8 | MKTF-27 | 2209730-002E | 0.00051 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-28 | 2209730-003E | 0.00044 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | NAPI-2 | 2209730-007E | 0.00053 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | DUP 9-14-22 | 2209730-010E | 0.00094 | 0.0010 | mg/L | J- | LR-LCS, MDLRL |
| Selenium, Total | E200.8 | MKTF-30 | 2209730-005D | 0.00053 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | NAPI-2 | 2209730-007D | 0.00063 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | NAPI-3 | 2209730-008D | 0.00054 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | KA-3 | 2209730-009D | 0.0008 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-27 | 2209730-002E | 0.0043 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-28 | 2209730-003E | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-30 | 2209730-005E | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.0025 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | NAPI-2 | 2209730-007E | 0.0026 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | NAPI-3 | 2209730-008E | 0.0028 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP 9-14-22 | 2209730-010E | 0.0040 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | MKTF-29 | 2209730-004D | 0.0026 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | NAPI-2 | 2209730-007a | 0.62 | 2.0 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH DRO | SW8015 | EB-09-14-22 | 2209730-001C | 0.71 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-29 | 2209730-004C | 1.2 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | OPIS-1 | 2209730-006C | 7.3 | 0.32 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | NAPI-2 | 2209730-007C | 2.7 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | NAPI-3 | 2209730-008C | 0.86 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | KA-3 | 2209730-009C | 0.61 | 0.064 | mg/L | J+ | HR-LCS |
| TPH DRO | SW8015 | MKTF-27 | 2209730-002C | 0.2 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-28 | 2209730-003C | 0.16 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-30 | 2209730-005C | 0.15 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | DUP 9-14-22 | 2209730-010C | 0.21 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH GRO | SW8015 | NAPI-2 | 2209730-007a | 4.1 | 0.50 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | NAPI-3 | 2209730-008a | 0.47 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | KA-3 | 2209730-009a | 0.12 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-27 | 2209730-002a | 0.03 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | MKTF-29 | 2209730-004a | 0.02 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | MKTF-30 | 2209730-005a | 0.028 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | DUP 9-14-22 | 2209730-010a | 0.032 | 0.050 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | OPIS-1 | 2209730-006C | 1.0 | 0.40 | mg/L | JB | EBD |
| TPH ORO | SW8015 | MKTF-29 | 2209730-004C | 0.84 | 0.080 | mg/L | U | EBD |
| TPH ORO | SW8015 | NAPI-2 | 2209730-007C | 0.14 | 0.080 | mg/L | U | EBD |
| TPH ORO | SW8015 | NAPI-3 | 2209730-008C | 0.086 | 0.080 | mg/L | U | EBD |
| TPH ORO | SW8015 | KA-3 | 2209730-009C | 0.11 | 0.080 | mg/L | U | EBD |
| TPH ORO | SW8015 | MKTF-27 | 2209730-002C | 0.068 | 0.080 | mg/L | U | EBD, MDLRL |
| TPH ORO | SW8015 | DUP 9-14-22 | 2209730-010C | 0.061 | 0.080 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-27 | 2209730-002E | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-28 | 2209730-003E | 0.0064 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-29 | 2209730-004E | 0.0083 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Dissolved | E 200.7 | MKTF-30 | 2209730-005E | 0.0046 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.029 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | NAPI-2 | 2209730-007E | 0.0042 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | NAPI-3 | 2209730-008E | 0.0023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | KA-3 | 2209730-009E | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 9-14-22 | 2209730-010E | 0.0048 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-27 | 2209730-002D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-28 | 2209730-003D | 0.034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-29 | 2209730-004D | 0.011 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-30 | 2209730-005D | 0.021 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OPIS-1 | 2209730-006D | 0.041 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPI-2 | 2209730-007D | 0.0092 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPI-3 | 2209730-008D | 0.0041 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | KA-3 | 2209730-009D | 0.019 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP 9-14-22 | 2209730-010D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | NAPI-3 | 2209730-008a | 1.2 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-27 | 2209730-002E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-28 | 2209730-003E | 0.043 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-29 | 2209730-004E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OPIS-1 | 2209730-006E | 0.023 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | NAPI-3 | 2209730-008E | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | KA-3 | 2209730-009E | 0.032 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP 9-14-22 | 2209730-010E | 0.010 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-30 | 2209730-005E | 0.009 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | NAPI-2 | 2209730-007E | 0.0096 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-09-14-22 | 2209730-001E | 0.0069 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-28 | 2209730-003D | 0.024 | 0.010 | mg/L | JB | EBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Total | E 200.7 | MKTF-27 | 2209730-002D | 0.004 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | OPIS-1 | 2209730-006D | 0.0068 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | KA-3 | 2209730-009D | 0.0089 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | EB-09-14-22 | 2209730-001D | 0.0052 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0004 | Sample Start Date: 09/15/2022 |
| Date Validated: 01/16/2023 | Sample End Date: 09/15/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Anions by EPA Method 300.0 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2209816 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-09-15-22 | 2209816-001 |
| MKTF-16 | 2209816-002 |
| OW-12A | 2209816-003 |
| OW-70 | 2209816-004 |
| OW-57 | 2209816-005 |
| FB 9-15-22 | 2209816-006 |
| DUP 9-15-22 | 2209816-007 |
| Trip Blank | 2209816-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ✓ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 456 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformance related to this data set.

Method 8270C: Naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for sample OW-57.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The container for sample MKTF-16 Method 8015 DRO/MRO was not received by the laboratory.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|------------------------|-----------------------------------|-----------------|
| 8015D | OW-57 | TPH DRO and MRO | 2 |
| 200.7 | MKTF-16, OW-12A, OW-57 | Select Total and Dissolved Metals | 5 |
| 200.8 | MKTF-16 | Total Lead | 5 |
| 300.0 | MKTF-16 | Anions | 5 |
| 8015D | MKTF-16, OW-12A | TPH GRO | 5 |
| 8260B | MKTF-16 | VOCs | 5 |
| 200.7 | MKTF-16 | Total Barium | 10 |
| 200.8 | OW-57 | Total Lead and Selenium | 20 |
| 200.7 | OW-57 | Total Barium | 50 |
| 8015D | OW-57 | TPH GRO | 50 |
| 8260B | OW-12A, OW-57 | Select VOCs | 50 |
| 200.7 | MKTF-16 | Total Iron | 100 |
| 8260B | OW-57 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of 4°C ± 2°C at 0.4°C, 1.3°C, and 1.4°C as noted on the <i>Sample Log-in Check List</i>. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 5.7°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter (µg/L) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 70323 at a concentration of 0.021 mg/L. The sample EB-09-15-22 TPH DRO result that was detected at a concentration equal to the blank concentration and less than the laboratory reporting limit was qualified with a U flag. The TPH DRO results in the remaining associated samples were greater than ten times the blank concentration and did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 70299 | MKTF-16, OW-12A |
| 200.7 | Total Metals | 70359 | Not Prepared |
| 200.7 | Dissolved Silver | A91392 | EB-09-15-22 |
| 200.7 | Dissolved Metals | C91347 | Not Prepared |
| 200.8 | Total Metals | 70299 | Not Prepared |
| 200.8 | Total Metals | 70359 | Not Prepared |
| 200.8 | Dissolved Metals | A91132 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 70307 | Not Prepared |
| 245.1 | Total Mercury | 70391 | Not Prepared |
| 300.0 | Anions | R91119 | Not Prepared |
| 504.1 | EDB | 70321 | Not Prepared |
| 4500CN E | Cyanide | WG1929558 | Not Associated |
| 8015D | TPH DRO and MRO | 70323 | Not Prepared |
| 8015D | TPH GRO | B91113 | Not Prepared |
| 8015D | TPH GRO | C91131 | Not Prepared |
| 8260B | VOCs | A91114 | Not Prepared |
| 8260B | VOCs | R91137 | Not Prepared |
| 8270C SIM | SVOCs | 70290 | Not Prepared |
| 8270C | SVOCs | 70290 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exception.

The LCS recovery for total cobalt in Method 200.7 batch 70299 was outside the acceptance limits of 70-130% at 141%. Total cobalt was detected in associated samples and the results were qualified with J+ flags due to potential high bias. Total cobalt was not detected in the associated sample EB-09-15-22 and the result did not require qualification.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-------------|-----------------------------|-------------|--------------------|-----------|
| 8015D (GRO) | Bromofluorobenzene (BFB) | OW-12A | 158% | 70-130% |
| 8015D (GRO) | BFB | OW-70 | 517% | 70-130% |
| 8015D (GRO) | BFB | DUP 9-15-22 | 493% | 70-130% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | EB-09-15-22 | 70.0% | 72.2-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | MKTF-16 | 53.5% | 72.2-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | OW-12A | 53.9% | 72.2-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | OW-70 | 54.7% | 72.2-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | OW-57 | 51.1% | 72.2-147% |
| 8270C-SIM | 4-Terphenyl-d ₁₄ | DUP 9-15-22 | 48.5% | 72.2-147% |

The associated analyte TPH GRO was detected in the identified samples. These results were qualified as J+ due to evidence of potential high bias.

Since Method 8270C and 8270C-SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C-SIM analysis for samples EB-09-15-22, MKTF-16, OW-12A, OW-70, OW-57, and DUP 9-15-22 and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB 9-15-22, and one equipment blank sample, EB-09-15-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|-----------------------|----------------------|
| Trip Blank | 8260B | Acetone | 2.7 µg/L |
| FB 9-15-22 | 8260B | 2-Butanone | 17 µg/L |
| FB 9-15-22 | 8260B | Acetone | 11 µg/L |
| EB-09-15-22 | 8260B | Acetone | 4.3 µg/L |
| EB-09-15-22 | 8015D | TPH DRO | 0.021 mg/L |
| EB-09-15-22 | 200.7 | Dissolved Zinc | 0.0066 mg/L |

Detections of acetone in the sample EB-09-15-22 and dissolved zinc in sample OW-57 that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. The detections of acetone and dissolved zinc in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 70323 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-9-15-22 was collected as a field duplicate of sample OW-70.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for total lead exceeded the data validation limit of 30% at 35.9%. The MTBE results for samples OW-70 and DUP-9-15-22 were assigned J qualifiers due to evidence of poor precision.

An RPD value could not be calculated for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene for the field duplicate pair OW-70 and DUP-9-15-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detections in the parent sample were greater than two times the reporting limit, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were qualified as J and UJ for the parent and duplicate samples, respectively.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1929558 from sample EB-09-15-22 and from a sample not associated with this data set.

The sample EB-09-15-22 and the laboratory duplicate were both non-detect for cyanide and a RPD could not be calculated.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method in this data set.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-16 | Antimony | 0.00049 | 0.00060 |
| OW-70 | Cadmium | ND | 0.0010 |
| OW-12A | Silver | ND | 0.0020 |
| OW-57 | Silver | ND | 0.0019 |
| EB-09-15-22 | Zinc | ND | 0.0066 |
| OW-12A | Zinc | 0.0083 | 0.013 |
| OW-70 | Zinc | 0.0047 | 0.011 |
| DUP 9-15-22 | Zinc | ND | 0.013 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-70
Field Duplicate Sample ID: DUP 9-15-22 | | | | |
|---|----------------|--------------------|-----------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.53 mg/L | 0.55 mg/L | 3.7% |
| Barium, Total | E 200.7 | 0.79 mg/L | 0.70 mg/L | 12.1% |
| Cadmium, Dissolved | E 200.7 | 0.0010 mg/L | ND (0.0020 mg/L) | DL |
| Chromium, Total | E 200.7 | 0.0070 mg/L | 0.0031 mg/L | 77.2% +/-RL |
| Cobalt, Dissolved | E 200.7 | 0.0042 mg/L | 0.0046 mg/L | 9.1% +/-RL |
| Cobalt, Total | E 200.7 | 0.0094 mg/L | 0.012 mg/L | 24.3% +/-RL |
| Nickel, Dissolved | E 200.7 | 0.044 mg/L | 0.043 mg/L | 2.3% |
| Nickel, Total | E 200.7 | 0.046 mg/L | 0.044 mg/L | 4.4% |
| Vanadium, Dissolved | E 200.7 | 0.0031 mg/L | 0.0025 mg/L | 21.4% +/-RL |
| Vanadium, Total | E 200.7 | 0.014 mg/L | 0.0083 mg/L | 51.1% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | 0.013 mg/L | 16.7% +/-RL |
| Zinc, Total | E 200.7 | 0.0047 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0012 mg/L | 0.0012 mg/L | 0.0% +/-RL |
| Arsenic, Total | E200.8 | 0.0028 mg/L | 0.0025 mg/L | 11.3% |
| Lead, Dissolved | E200.8 | 0.00012 mg/L | 0.00013 mg/L | 8.0% +/-RL |
| Lead, Total | E200.8 | 0.0023 mg/L | 0.0016 mg/L | 35.9% |
| Selenium, Total | E200.8 | 0.00069 mg/L | ND (0.0010) mg/L | DL |
| TPH DRO | SW8015 | 0.94 mg/L | 0.96 mg/L | 2.1% |
| TPH GRO | SW8015 | 0.39 mg/L | 0.35 mg/L | 10.8% |
| 1,1-Dichloroethane | SW8260B | 0.49 µg/L | 0.47 µg/L | 4.2% +/-RL |
| 1,2,4-Trimethylbenzene | SW8260B | 0.13 µg/L | 0.15 µg/L | 14.3% +/-RL |
| 1,2-Dichloroethane | SW8260B | 6.8 µg/L | 5.9 µg/L | 14.2% |
| Benzene | SW8260B | 1.0 µg/L | 0.99 µg/L | 1.0% +/-RL |
| Isopropylbenzene | SW8260B | 30 µg/L | 28 µg/L | 6.9% |
| MTBE | SW8260B | 60 µg/L | 55 µg/L | 8.7% |
| n-Butylbenzene | SW8260B | 1.5 µg/L | 1.4 µg/L | 6.9% +/-RL |
| n-Propylbenzene | SW8260B | 1.1 µg/L | 1.0 µg/L | 9.5% +/-RL |
| sec-Butylbenzene | SW8260B | 6.5 µg/L | 6.4 µg/L | 1.6% |
| 1,4-Dioxane | SW8270C | 0.70 µg/L | 0.66 µg/L | 5.9% +/-RL |
| 1-Methylnaphthalene | SW8270C | 1.0 µg/L | ND (0.30 µg/L) | DL |
| 2-Methylnaphthalene | SW8270C | 0.74 µg/L | ND (0.30 µg/L) | DL |
| Acenaphthene | SW8270C | 0.18 µg/L | 0.14 µg/L | 25.0% +/-RL |
| Anthracene | SW8270C | 0.18 µg/L | 0.20 µg/L | 10.5% +/-RL |
| Di-n-butylphthalate | SW8270C | ND (10 µg/L) | 20 µg/L | DL |
| Fluoranthene | SW8270C | ND (0.30 µg/L) | 0.20 µg/L | DL |



| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
|--------------|---------|-------------------|------------------|-----------------------------------|
| Naphthalene | SW8270C | 1.3 µg/L | ND (0.30 µg/L) | DL |
| Phenanthrene | SW8270C | 0.40 µg/L | 0.34 µg/L | 16.2% +/-RL |
| Phenol | SW8270C | 29 µg/L | ND (20 µg/L) | DL |
| Pyrene | SW8270C | ND (1.0 µg/L) | 0.44 µg/L | DL |

Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD value for total lead exceeded the data validation limit of 30% at 35.9%, which was evidence of poor precision. The MTBE results were qualified as J for samples OW-70 and DUP 9-15-22.

An RPD value could not be calculated for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene for the field duplicate pair OW-70 and DUP 9-15-22 since the analyte was detected in the parent sample and was undetected in the duplicate sample. As the detections in the parent sample were greater than two times the reporting limit, 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene were qualified as J and UJ for the parent and duplicate samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| MBD | Method blank detection |
| HR-MS | The MS and/or MSD percent recovery was greater than the upper acceptable limit indicating possible matrix interference. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| EBD | Equipment blank detection |
| TBD | Trip blank detection |
| ERPD-FD | High field duplicate RPD. |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | OW-70 | 2209816-004a | 0.49 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethane | SW8260B | DUP 9-15-22 | 2209816-007a | 0.47 | 1.0 | µg/L | J | MDLRL |
| 1,1-Dichloroethene | SW8260B | OW-12A | 2209816-003a | 0.34 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | OW-70 | 2209816-004a | 0.13 | 1.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP 9-15-22 | 2209816-007a | 0.15 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | OW-12A | 2209816-003a | 0.44 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-70 | 2209816-004c | 0.70 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-57 | 2209816-005c | 0.80 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | DUP 9-15-22 | 2209816-007c | 0.66 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-70 | 2209816-004c | 1.0 | 0.30 | µg/L | J | ERPD-FD |
| 1-Methylnaphthalene | SW8270C | DUP 9-15-22 | 2209816-007c | ND | 0.30 | µg/L | UJ | ERPD-FD |
| 2-Methylnaphthalene | SW8270C | OW-70 | 2209816-004c | 0.74 | 0.30 | µg/L | J | ERPD-FD |
| 2-Methylnaphthalene | SW8270C | DUP 9-15-22 | 2209816-007c | ND | 0.30 | µg/L | UJ | ERPD-FD |
| 2-Methylnaphthalene | SW8270C | MKTF-16 | 2209816-002c | 0.16 | 0.30 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-12A | 2209816-003c | 0.16 | 0.30 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Acenaphthene | SW8270C | OW-70 | 2209816-004c | 0.18 | 0.30 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | DUP 9-15-22 | 2209816-007c | 0.14 | 0.30 | µg/L | J | MDLRL |
| Acetone | SW8260B | FB 9-15-22 | 2209816-006a | 11 | 10 | µg/L | JB | TBD |
| Acetone | SW8260B | Trip Blank | 2209816-008a | 2.7 | 10 | µg/L | J | MDLRL |
| Acetone | SW8260B | EB-09-15-22 | 2209816-001a | 4.3 | 10 | µg/L | U | MDLRL, TBD |
| Anthracene | SW8270C | OW-70 | 2209816-004c | 0.18 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-57 | 2209816-005c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | DUP 9-15-22 | 2209816-007c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-16 | 2209816-002E | 0.0006 | 0.0010 | mg/L | J | MDLRL |
| Antimony, Total | E200.8 | MKTF-16 | 2209816-002D | 0.00049 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | DUP 9-15-22 | 2209816-007a | 0.99 | 1.0 | µg/L | J | MDLRL |
| Cadmium, Dissolved | E 200.7 | OW-70 | 2209816-004E | 0.0010 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | DUP 9-15-22 | 2209816-007D | 0.0031 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-70 | 2209816-004E | 0.0042 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | DUP 9-15-22 | 2209816-007E | 0.0046 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-16 | 2209816-002D | 0.012 | 0.0060 | mg/L | J+ | HR-MS |
| Cobalt, Total | E 200.7 | OW-12A | 2209816-003D | 0.011 | 0.0060 | mg/L | J+ | HR-MS |
| Cobalt, Total | E 200.7 | OW-70 | 2209816-004D | 0.0094 | 0.0060 | mg/L | J+ | HR-MS |
| Cobalt, Total | E 200.7 | DUP 9-15-22 | 2209816-007D | 0.012 | 0.0060 | mg/L | J+ | HR-MS |
| Fluoranthene | SW8270C | DUP 9-15-22 | 2209816-007c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-16 | 2209816-002a | 1.7 | 5.0 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-57 | 2209816-005a | 16 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-70 | 2209816-004E | 0.00012 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP 9-15-22 | 2209816-007E | 0.00013 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-70 | 2209816-004D | 0.0023 | 0.00050 | mg/L | J | ERPD-FD |
| Lead, Total | E200.8 | DUP 9-15-22 | 2209816-007D | 0.0016 | 0.00050 | mg/L | J | ERPD-FD |
| MTBE | SW8260B | OW-57 | 2209816-005a | 41 | 50 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Naphthalene | SW8270C | OW-70 | 2209816-004c | 1.3 | 0.30 | µg/L | J | ERPD-FD |
| Naphthalene | SW8270C | DUP 9-15-22 | 2209816-007c | ND | 0.30 | µg/L | UJ | ERPD-FD |
| n-Butylbenzene | SW8260B | OW-12A | 2209816-003a | 0.89 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | OW-70 | 2209816-004a | 1.5 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | DUP 9-15-22 | 2209816-007a | 1.4 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-16 | 2209816-002E | 0.0075 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-12A | 2209816-003E | 0.0076 | 0.010 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-16 | 2209816-002a | 1.4 | 5.0 | µg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | OW-57 | 2209816-005a | 42 | 50 | µg/L | J | MDLRL |
| Pyrene | SW8270C | DUP 9-15-22 | 2209816-007c | 0.44 | 1.0 | µg/L | J | MDLRL |
| Selenium, Total | E200.8 | OW-70 | 2209816-004D | 0.00069 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-12A | 2209816-003E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-57 | 2209816-005E | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | MKTF-16 | 2209816-002a | 1.4 | 5.0 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-57 | 2209816-005a | 27 | 50 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | EB-09-15-22 | 2209816-001C | 0.021 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-12A | 2209816-003a | 3.6 | 0.25 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-70 | 2209816-004a | 0.39 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | DUP 9-15-22 | 2209816-007a | 0.35 | 0.050 | mg/L | J+ | HR-SUR |
| Vanadium, Dissolved | E 200.7 | MKTF-16 | 2209816-002E | 0.0042 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-12A | 2209816-003E | 0.0044 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-70 | 2209816-004E | 0.0031 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-57 | 2209816-005E | 0.0039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 9-15-22 | 2209816-007E | 0.0025 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-12A | 2209816-003D | 0.027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-70 | 2209816-004D | 0.014 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP 9-15-22 | 2209816-007D | 0.0083 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vinyl Chloride | SW8260B | MKTF-16 | 2209816-002a | 2.0 | 5.0 | µg/L | J | MDLRL |
| Xylenes, Total | SW8260B | MKTF-16 | 2209816-002a | 5.6 | 7.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-57 | 2209816-005E | 0.0098 | 0.010 | mg/L | U | MBD, MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-16 | 2209816-002E | 0.017 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-12A | 2209816-003E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-70 | 2209816-004E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP 9-15-22 | 2209816-007E | 0.013 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | EB-09-15-22 | 2209816-001E | 0.0066 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-12A | 2209816-003D | 0.0083 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-70 | 2209816-004D | 0.0047 | 0.010 | mg/L | J | MDLRL |





Western Refining Southwest LLC
D/B/A Marathon Gallup Refinery
2022 Annual Groundwater Monitoring Report

Appendix D-4. 4th Quarter Data Validation Reports



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 12/15/2022 |
| Date Validated: 01/31/2023 | Sample End Date: 12/15/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212A11 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-15-22 | 2212a11-001 |
| MKTF-30 | 2212a11-002 |
| STP-1-NW | 2212a11-003 |
| OPIS-1 | 2212a11-004 |
| FB-12-15-22 | 2212a11-005 |
| Dup-12-15-22 | 2212a11-006 |
| Trip Blank | 2212a11-007 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ✓ Trip, Field, and Equipment Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 360 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 80156D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % PRD is out of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The trip blank sample was received by the laboratory but was not included on the CoC. The laboratory logged in the sample and performed the appropriate volatile analyses. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------|----------------------------|------------------------|
| 200.8 | Multiple Samples | Total and Dissolved Metals | 5 |
| 8015D | OPIS-1 | TPH DRO and MRO | 5 |
| 8015D | OPIS-1 | VOCs | 5 |
| 8270C | OPIS-1 | SVOCs | 10 |
| 8270C SIM | OPIS-1 | SVOCs | 10 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.4°C , 0.6°C , and 3.1°C as noted on Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 4.0°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|-----------------|-------|---------------|
| 200.7 | Total Beryllium | 72221 | 0.00082 mg/L |
| 8015D | TPH DRO | 72199 | 0.097 mg/L |

Detections of total beryllium and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 72221 | Not Prepared |
| 200.7 | Dissolved Metals | C93558 | EB-12-15-22, MKTF-30 |
| 200.8 | Total Metals | 72221 | Not Prepared |
| 200.8 | Dissolved Metals | A93438 | EB-12-15-22, MKTF-30 |
| 200.8 | Dissolved Antimony | A93556 | MKTF-30, STP-1-NW |
| 245.1 | Total and Dissolved Mercury | 72295 | Not Prepared |
| 504.1 | EDB | 72313 | Not Prepared |
| 4500CN E | Cyanide | WG1977924 | Not Associated |
| 8015D | TPH DRO and MRO | 72199 | Not Prepared |
| 8015D | TPH GRO | B93549 | MKTF-30 |
| 8260B | VOCs | R93599 | MKTF-30 |
| 8270C SIM | SVOCs | 72138 | Not Prepared |
| 8270C | SVOCs | 72138 | Not Prepared |
| 8270C SIM | SVOCs | 72239 | Not Prepared |
| 8270C | SVOCs | 72239 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits, with the following exceptions.

| <u>Method</u> | <u>Analyte</u> | <u>Batch</u> | <u>MS Recovery</u> | <u>MSD Recovery</u> | <u>MS/MSD QC Limits</u> |
|---------------|---------------------|--------------|--------------------|---------------------|-------------------------|
| 200.7 | Dissolved Barium | C93558 | 65.3% | 62.2% | 75-125% |
| 200.7 | Dissolved Beryllium | C93558 | Acceptable | 73.0% | 75-125% |
| 200.7 | Dissolved Cadmium | C93558 | 70.1% | 66.7% | 75-125% |
| 200.7 | Dissolved Chromium | C93558 | 64.4% | 60.9% | 75-125% |
| 200.7 | Dissolved Cobalt | C93558 | 64.0% | 60.9% | 75-125% |
| 200.7 | Dissolved Nickel | C93558 | 64.0% | 61.2% | 75-125% |
| 200.7 | Dissolved Silver | C93558 | 58.1% | 56.5% | 75-125% |
| 200.7 | Dissolved Vanadium | C93558 | 72.2% | 69.4% | 75-125% |
| 200.7 | Dissolved Zinc | C93558 | 64.9% | 61.5% | 75-125% |

Detections of the identified analytes in the associated samples were qualified as J- due to evidence of potential low bias. Non-detections of these analytes in the associated samples were qualified as UJ.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|--------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Nickel | 72221 | 148% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Nickel | C93558 | 137% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Chromium | C93558 | 50.7% | ----- | 70-130% | ----- | ----- |
| 245.1 | Mercury | 72295 | 148% | ----- | 70-130% | ----- | ----- |
| 504.1 | EDB | 72313 | Acceptable | Acceptable | 70-130% | 40.2% | 20% |
| 8270C | Pyrene | 72239 | Acceptable | Acceptable | 61-123% | 16.6% | 11.8% |
| 8270C SIM | 1,4-Dioxane | 72239 | Acceptable | Acceptable | 15-60.5% | 32.3% | 29.7% |
| 8270C SIM | Anthracene | 72239 | Acceptable | Acceptable | 21.1-106% | 22.5% | 14.4% |
| 8270C SIM | Fluoranthene | 72239 | Acceptable | Acceptable | 32.8-119% | 24.9% | 14.8% |
| 8270C SIM | Pyrene | 72239 | Acceptable | Acceptable | 34.1-110% | 24.7% | 19.2% |

Dissolved chromium was not detected in the associated samples, and these results were qualified as UJ due to evidence of potential low bias.

Detections of total nickel, dissolved nickel, and mercury were assigned J+ qualifiers due to evidence of potential high bias. Non-detections of these analytes in the associated samples did not require qualification.

The analytes with LCS/LCSD RPD values that exceeded the QC limits were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

The Method 8015D surrogate BFB in sample OPIS-1 was recovered outside the acceptance limits of 70-130% at 164%. TPH GRO was detected in the Method 8015D analysis of sample OPIS-1, and this result was qualified as J+ due to evidence of potential high bias.

The SVOC results for sample OPIS-1 were not qualified based on the surrogate non-conformances in the Method 8270C analyses since the applied dilution of 10 times resulted in surrogate concentrations below routinely calibrated levels and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-15-22, and one equipment blank sample, EB-12-15-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration (mg/L)</u> |
|------------------------|---------------|-------------------|-----------------------------|
| EB-12-15-22 | 245.1 | Total Mercury | 0.000099 |
| EB-12-15-22 | 245.1 | Dissolved Mercury | 0.000097 |
| EB-12-15-22 | 8015D | TPH DRO | 0.030 |

Total mercury and dissolved mercury were not detected in the associated samples and the results did not require qualification based on the equipment blank detections.

The TPH DRO results in Method 8015D batch 72199 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample Dup-12-15-22 was collected as a field duplicate of sample STP-1-NW.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1977924 from a samples not associated with this data set.

The RPD value for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OPIS-1 | Antimony | ND | 0.0032 |
| STP-1-NW | Arsenic | 0.0018 | 0.0022 |
| DUP-12-15-22 | Arsenic | 0.0019 | 0.0023 |
| DUP-12-15-22 | Selenium | 0.0058 | 0.0070 |
| STP-1-NW | Vanadium | 0.028 | 0.039 |
| DUP-12-15-22 | Vanadium | 0.028 | 0.029 |
| OPIS-1 | Zinc | 0.0079 | 0.0097 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: STP-1-NW
Field Duplicate Sample ID: DUP-12-15-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.063 mg/L | 0.056 mg/L | 11.8% |
| Barium, Total | E 200.7 | 0.098 mg/L | 0.10 mg/L | 2.0% |
| Chromium, Total | E 200.7 | 0.0023 mg/L | 0.0022 mg/L | 4.4% +/-RL |
| Silver, Dissolved | E 200.7 | 0.0016 mg/L | 0.0013 mg/L | 20.7% +/-RL |
| Silver, Total | E 200.7 | 0.0022 mg/L | 0.0019 mg/L | 14.6% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.039 mg/L | 0.029 mg/L | 29.4% +/-RL |
| Vanadium, Total | E 200.7 | 0.028 mg/L | 0.028 mg/L | 0.0% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.0022 mg/L | 0.0023 mg/L | 4.4% +/-RL |
| Arsenic, Total | E200.8 | 0.0018 mg/L | 0.0019 mg/L | 5.4% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0073 mg/L | 0.0070 mg/L | 4.2% +/-RL |
| Selenium, Total | E200.8 | 0.0093 mg/L | 0.0058 mg/L | 46.4% +/-RL |
| Cyanide, Total | E335.4 | 0.0538 mg/L | 0.0503 mg/L | 6.7% |
| TPH DRO | SW8015 | 0.20 mg/L | 0.20 mg/L | 0.0% |
| TPH ORO | SW8015 | 0.074 mg/L | ND (0.080 mg/L) | DL |
| 1,4-Dioxane | SW8270C | 0.12 µg/L | 0.12 µg/L | 0.0% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 1,2-Dibromoethane | E504.1 | EB-12-15-22 | 2212A11-001B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | MKTF-30 | 2212A11-002B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | STP-1-NW | 2212A11-003B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | OPIS-1 | 2212A11-004B | ND | 0.0094 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | Dup-12-15-22 | 2212A11-006B | ND | 0.0093 | µg/L | UJ | ERPD-LCS |
| 1,2-Dibromoethane | E504.1 | Trip Blank | 2212A11-007B | ND | 0.0096 | µg/L | UJ | ERPD-LCS |
| 1,4-Dioxane | SW8270C | STP-1-NW | 2212a11-003c | 0.12 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | Dup-12-15-22 | 2212a11-006c | 0.12 | 1.0 | µg/L | J | ERPD-LCS, MDLRL |
| Anthracene | SW8270C | Dup-12-15-22 | 2212a11-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Antimony, Dissolved | E200.8 | OPIS-1 | 2212A11-004E | 0.0032 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | STP-1-NW | 2212A11-003E | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OPIS-1 | 2212A11-004E | 0.0043 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | Dup-12-15-22 | 2212A11-006E | 0.0023 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | STP-1-NW | 2212A11-003D | 0.0018 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Total | E200.8 | OPIS-1 | 2212A11-004D | 0.0044 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | Dup-12-15-22 | 2212A11-006D | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | 0.029 | 0.0020 | mg/L | J- | LR-MS |
| Barium, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | 0.063 | 0.0020 | mg/L | J- | LR-MS |
| Barium, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.71 | 0.0020 | mg/L | J- | LR-MS |
| Barium, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | 0.056 | 0.0020 | mg/L | J- | LR-MS |
| Barium, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Beryllium, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.00081 | 0.0020 | mg/L | U | MBD, MDLRL |
| Beryllium, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Beryllium, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Beryllium, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Beryllium, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Beryllium, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Cadmium, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Cadmium, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Cadmium, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Cadmium, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Cadmium, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.0020 | mg/L | UJ | LR-MS |
| Chromium, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0060 | mg/L | UJ | LR-LCS, LR-MS |
| Chromium, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | ND | 0.0060 | mg/L | UJ | LR-LCS, LR-MS |
| Chromium, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.0060 | mg/L | UJ | LR-LCS, LR-MS |
| Chromium, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | ND | 0.0060 | mg/L | UJ | LR-LCS, LR-MS |
| Chromium, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.0060 | mg/L | UJ | LR-LCS, LR-MS |
| Chromium, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.0054 | 0.006 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | STP-1-NW | 2212A11-003D | 0.0023 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | Dup-12-15-22 | 2212A11-006D | 0.0022 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0060 | mg/L | UJ | LR-MS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|----------|--------|-------|--------------------|-----------------|
| Cobalt, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | ND | 0.0060 | mg/L | UJ | LR-MS |
| Cobalt, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.0060 | mg/L | UJ | LR-MS |
| Cobalt, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.0060 | mg/L | UJ | LR-MS |
| Cobalt, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.0041 | 0.0060 | mg/L | J- | LR-MS, MDLRL |
| Cobalt, Total | E 200.7 | OPIS-1 | 2212A11-004D | 0.0048 | 0.0060 | mg/L | J | MDLRL |
| Ethylbenzene | SW8260B | OPIS-1 | 2212a11-004a | 4.6 | 5.0 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | Dup-12-15-22 | 2212a11-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Mercury, Dissolved | E245.1 | EB-12-15-22 | 2212A11-001E | 0.000097 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | EB-12-15-22 | 2212A11-001D | 0.000099 | 0.0002 | mg/L | J+ | HR-LCS, MDLRL |
| Nickel, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.010 | mg/L | UJ | LR-MS |
| Nickel, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.010 | mg/L | UJ | LR-MS |
| Nickel, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.010 | mg/L | UJ | LR-MS |
| Nickel, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | 0.013 | 0.010 | mg/L | J | HR-LCS, LR-MS |
| Nickel, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.15 | 0.010 | mg/L | J | HR-LCS, LR-MS |
| Nickel, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.024 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OPIS-1 | 2212A11-004D | 0.18 | 0.010 | mg/L | J+ | HR-LCS |
| Pyrene | SW8270C | Dup-12-15-22 | 2212a11-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Selenium, Dissolved | E200.8 | OPIS-1 | 2212A11-004E | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | OPIS-1 | 2212A11-004D | 0.0045 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.0050 | mg/L | UJ | LR-MS |
| Silver, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | 0.0020 | 0.0050 | mg/L | J- | LR-MS, MDLRL |
| Silver, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | 0.0016 | 0.0050 | mg/L | J- | LR-MS, MDLRL |
| Silver, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.0019 | 0.0050 | mg/L | J- | LR-MS, MDLRL |
| Silver, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | 0.0013 | 0.0050 | mg/L | J- | LR-MS, MDLRL |
| Silver, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | STP-1-NW | 2212A11-003D | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | OPIS-1 | 2212A11-004D | 0.0019 | 0.0050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| Silver, Total | E 200.7 | Dup-12-15-22 | 2212A11-006D | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-30 | 2212A11-002C | 0.33 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | STP-1-NW | 2212A11-003C | 0.20 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | Dup-12-15-22 | 2212A11-006C | 0.20 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-12-15-22 | 2212A11-001C | 0.03 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OPIS-1 | 2212a11-004a | 0.44 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-30 | 2212a11-002a | 0.020 | 0.050 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | STP-1-NW | 2212A11-003C | 0.074 | 0.080 | mg/L | J | MDLRL |
| Trichloroethene | SW8260B | MKTF-30 | 2212a11-002a | 0.95 | 1.0 | µg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.050 | mg/L | UJ | LR-MS |
| Vanadium, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | 0.0031 | 0.050 | mg/L | J- | LR-MS, MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | 0.039 | 0.050 | mg/L | J- | LR-MS, MDLRL |
| Vanadium, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.010 | 0.050 | mg/L | J- | LR-MS, MDLRL |
| Vanadium, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | 0.029 | 0.050 | mg/L | J- | LR-MS, MDLRL |
| Vanadium, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | STP-1-NW | 2212A11-003D | 0.028 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OPIS-1 | 2212A11-004D | 0.018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | Dup-12-15-22 | 2212A11-006D | 0.028 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | EB-12-15-22 | 2212A11-001E | ND | 0.010 | mg/L | UJ | LR-MS |
| Zinc, Dissolved | E 200.7 | MKTF-30 | 2212A11-002E | ND | 0.010 | mg/L | UJ | LR-MS |
| Zinc, Dissolved | E 200.7 | STP-1-NW | 2212A11-003E | ND | 0.010 | mg/L | UJ | LR-MS |
| Zinc, Dissolved | E 200.7 | Dup-12-15-22 | 2212A11-006E | ND | 0.010 | mg/L | UJ | LR-MS |
| Zinc, Dissolved | E 200.7 | OPIS-1 | 2212A11-004E | 0.0097 | 0.010 | mg/L | J- | LR-MS, MDLRL |
| Zinc, Total | E 200.7 | MKTF-30 | 2212A11-002D | 0.0096 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OPIS-1 | 2212A11-004D | 0.0079 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-082-003 Task: 0002 | Sample Start Date: 12/22/2022 |
| Date Validated: 02/14/2023 | Sample End Date: 12/22/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212D48 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-22-22 | 2212d48-001 |
| OW-1 | 2212d48-002 |
| BW-4B | 2212d48-003 |
| BW-5C | 2212d48-004 |
| BW-5B | 2212d48-005 |
| MKTF-44 | 2212d48-006 |
| OW-10 | 2212d48-007 |
| MKTF-43 | 2212d48-008 |
| FB-12-22-22 | 2212d48-009 |
| DUP-12-22-22 | 2212d48-010 |
| Trip Blank | 2212d48-011 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Trip, Field, and Equipment Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| JB | Estimated concentration due to blank contamination |
| U | Evaluated to be undetected at the reporting limit |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 720 data points. The data completeness calculation does not include any submitted blank sample results. Seven data points were rejected. The data completeness measure for this data package is calculated to be 99.03% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: 1-Methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for samples OW-1.

1-Methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample BW-5C

Method 80156D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B". The laboratory control spike (LCS) had an elevated recovery.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

E – Above quantitation range / estimated value. *This flag was mistakenly applied according to the results reported.*

J – Analyte detected below quantitation limits.

J3 – The associated batch QC was outside the established quality control range for precision.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The trip blank sample was received by the laboratory, but the parameters requested were not indicated on the CoC. The laboratory logged in the sample and performed the appropriate volatile analyses. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------|-----------------------------------|------------------------|
| 200.7 | MKTF-43 | Total Metals | 5 |
| 200.8 | OW-10, BW-5C | Select Total and Dissolved Metals | 5 |
| 200.8 | MKTF-43 | Dissolved Metals | 10 |
| 200.8 | MKTF-43 | Total Metals | 20 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 0.4°C to 3.1°C as noted on Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.4°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|------------|-------|---------------|
| 200.7 | Total Zinc | 72387 | 0.0051 mg/L |
| 8015D | TPH DRO | 72336 | 0.079 mg/L |

Detections of total zinc and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total zinc and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|----------------------|
| 200.7 | Total Metals | 72387 | Not Prepared |
| 200.7 | Dissolved Metals | A93766 | Not Prepared |
| 200.8 | Total Metals | 72387 | Not Prepared |
| 200.8 | Dissolved Metals | A93855 | Not Prepared |
| 200.8 | Dissolved Metals | A93877 | Not Prepared |
| 200.8 | Dissolved Metals | A93915 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 72445 | EB-12-22-22 |
| 504.1 | EDB | 72358 | Not Prepared |
| 4500CN E | Cyanide | WG1980609 | Not Associated |
| 4500CN E | Cyanide | WG1980984 | MKTF-43, FB-12-22-22 |
| 8015D | TPH DRO and MRO | 72336 | Not Prepared |
| 8015D | TPH GRO | R93580 | OW-1 |
| 8015D | TPH GRO | R93606 | Not Prepared |
| 8260B | VOCs | R93684 | Not Prepared |
| 8270C SIM | SVOCs | 72320 | Not Prepared |
| 8270C | SVOCs | 72320 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation or laboratory QC limits.

The MS recovery for cyanide in Method 4500CN E batch WG1980984 was outside the laboratory QC limits of 90.0-110% at 89.3%. However, the recovery was within data validation limits of 75-125%. Validation action was not required.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits |
|--------|--------------|-------|--------------|---------------|--------------------|
| 200.7 | Total Cobalt | 72387 | 195% | ----- | 70-130% |
| 8015D | TPH DRO | 72336 | 137% | 134% | 31.2-125% |

Detections of total cobalt and TPH DRO were assigned J+ qualifiers due to evidence of potential high bias. Non-detections of total cobalt in the associated samples did not require qualification.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|---------|--------------------|-----------|
| 8270C | 2-Fluorophenol | MKTF-43 | 1.10% | 15-84.5% |
| 8270C | Phenol-d ₅ | MKTF-43 | 4.92% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | MKTF-43 | 1.52% | 15-108% |

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

The analytes in the acid fraction of sample MKTF-43 were not detected. Since the recoveries of the surrogates in sample MKTF-43 were less than 10%, the results for the associated acid fraction analytes were assigned R qualifiers to indicate rejected (not usable) data based on evidence of extreme low bias.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-22-22, and one equipment blank sample, EB-12-22-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration (mg/L)</u> |
|------------------------|---------------|--------------------------|-----------------------------|
| EB-12-22-22 | 8015D | TPH DRO | 0.019 |
| EB-12-22-22 | 245.1 | Total Mercury | 0.00014 |
| EB-12-22-22 | 245.1 | Dissolved Mercury | 0.00013 |

Detections of total mercury and dissolved mercury in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total mercury in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers.

The TPH DRO results in Method 8015D batch 72366 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample Dup-12-22-22 was collected as a field duplicate of sample OW-1.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1980609 from samples not associated with this data set and the analysis of cyanide in batch WG1980984 from samples MKTF-44 and OW-10.

The RPDs for laboratory duplicates prepared from project samples were not applicable because the measurements were reported as not detected in samples MKTF-44 and OW-10.

The RPD value for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)?

N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results?

No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-1 | Mercury | 0.00012 | 0.00014 |
| BW-5B | Arsenic | 0.0013 | 0.0017 |
| BW-5C | Arsenic | ND | 0.0013 |
| OW-1 | Barium | 0.034 | 0.035 |
| MKTF-43 | Beryllium | ND | 0.00085 |
| MKTF-43 | Nickel | ND | 0.0056 |
| BW-4B | Selenium | ND | 0.0016 |
| BW-5B | Selenium | 0.0015 | 0.0064 |
| BW-5C | Selenium | ND | 0.010 |
| DUP-12-22-22 | Selenium | ND | 0.0044 |
| MKTF-43 | Selenium | ND | 0.088 |
| MKTF-44 | Selenium | 0.014 | 0.015 |
| OW-1 | Selenium | 0.0015 | 0.0047 |
| OW-10 | Selenium | 0.0076 | 0.015 |
| BW-5C | Silver | ND | 0.0013 |
| MKTF-43 | Silver | ND | 0.025 |
| MKTF-43 | Vanadium | ND | 0.0058 |
| BW-5C | Zinc | ND | 0.0088 |
| BW-5B | Zinc | ND | 0.011 |
| OW-10 | Zinc | ND | 0.0069 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-1
Field Duplicate Sample ID: DUP-12-22-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.035 mg/L | 0.034 mg/L | 2.9% |
| Barium, Total | E 200.7 | 0.034 mg/L | 0.037 mg/L | 8.5% |
| Vanadium, Dissolved | E 200.7 | 0.044 mg/L | 0.043 mg/L | 2.3% +/-RL |
| Vanadium, Total | E 200.7 | 0.049 mg/L | 0.052 mg/L | 5.9% +/-RL |
| Arsenic, Dissolved | E200.8 | 0.00078 mg/L | 0.00075 mg/L | 3.9% +/-RL |
| Arsenic, Total | E200.8 | 0.00088 mg/L | 0.00092 mg/L | 4.4% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0047 mg/L | 0.0044 mg/L | 6.6% |
| Selenium, Total | E200.8 | 0.0015 mg/L | ND (0.0010 mg/L) | DL |
| Mercury, Dissolved | E245.1 | 0.00014 mg/L | 0.00012 mg/L | 15.4% +/-RL |
| Mercury, Total | E245.1 | 0.00012 mg/L | 0.00012 mg/L | 0.0% +/-RL |
| TPH DRO | SW8015 | 0.028 mg/L | 0.029 mg/L | 3.5% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | BW-5B | 2212d48-005c | 0.64 | 1.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 20 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 10 | µg/L | R | LR-SUR |
| Arsenic, Dissolved | E200.8 | OW-1 | 2212D48-002E | 0.00078 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-12-22-22 | 2212D48-010E | 0.00075 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-1 | 2212D48-002D | 0.00088 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-10 | 2212D48-007D | 0.00061 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP-12-22-22 | 2212D48-010D | 0.00092 | 0.0010 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | MKTF-43 | 2212d48-008c | ND | 20 | µg/L | R | LR-SUR |
| Beryllium, Dissolved | E 200.7 | MKTF-43 | 2212D48-008E | 0.00085 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | BW-4B | 2212D48-003D | 0.0053 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | BW-5C | 2212D48-004D | 0.0046 | 0.0060 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | MKTF-44 | 2212D48-006D | 0.0038 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-10 | 2212D48-007D | 0.0062 | 0.0060 | mg/L | J+ | HR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Cobalt, Total | E 200.7 | MKTF-43 | 2212D48-008D | 0.095 | 0.030 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | BW-4B | 2212D48-003D | 0.0037 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cobalt, Total | E 200.7 | BW-5C | 2212D48-004D | 0.0059 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cobalt, Total | E 200.7 | BW-5B | 2212D48-005D | 0.0057 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cobalt, Total | E 200.7 | MKTF-44 | 2212D48-006D | 0.0054 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | EB-12-22-22 | 2212D48-001E | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-1 | 2212D48-002E | 0.00014 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | BW-4B | 2212D48-003E | 0.00010 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | BW-5C | 2212D48-004E | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | BW-5B | 2212D48-005E | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-44 | 2212D48-006E | 0.00010 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-10 | 2212D48-007E | 0.00011 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-43 | 2212D48-008E | 0.000093 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | DUP-12-22-22 | 2212D48-010E | 0.00012 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | BW-5C | 2212D48-004D | 0.00027 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | EB-12-22-22 | 2212D48-001D | 0.00014 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-1 | 2212D48-002D | 0.00012 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | BW-4B | 2212D48-003D | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | BW-5B | 2212D48-005D | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | MKTF-44 | 2212D48-006D | 0.00011 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | OW-10 | 2212D48-007D | 0.00011 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | MKTF-43 | 2212D48-008D | 0.000097 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | DUP-12-22-22 | 2212D48-010D | 0.00012 | 0.00020 | mg/L | U | EBD, MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-43 | 2212D48-008E | 0.0056 | 0.010 | mg/L | J | MDLRL |
| Phenol | SW8270C | MKTF-43 | 2212d48-008c | ND | 20 | µg/L | R | LR-SUR |
| Silver, Dissolved | E 200.7 | BW-5C | 2212D48-004E | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | BW-5C | 2212D48-004C | 0.081 | 0.064 | mg/L | JB | HR-LCS, MBD |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|--------------------|
| TPH DRO | SW8015 | MKTF-43 | 2212D48-008C | 0.13 | 0.064 | mg/L | JB | HR-LCS, MBD |
| TPH DRO | SW8015 | EB-12-22-22 | 2212D48-001C | 0.019 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-1 | 2212D48-002C | 0.028 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | BW-4B | 2212D48-003C | 0.063 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | BW-5B | 2212D48-005C | 0.039 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-44 | 2212D48-006C | 0.024 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-10 | 2212D48-007C | 0.069 | 0.064 | mg/L | U | HR-LCS, MBD |
| TPH DRO | SW8015 | DUP-12-22-22 | 2212D48-010C | 0.029 | 0.064 | mg/L | U | HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | BW-5C | 2212d48-004a | 0.02 | 0.05 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-1 | 2212D48-002E | 0.044 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-4B | 2212D48-003E | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5C | 2212D48-004E | 0.0034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | BW-5B | 2212D48-005E | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-10 | 2212D48-007E | 0.0064 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-43 | 2212D48-008E | 0.0058 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-12-22-22 | 2212D48-010E | 0.043 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-1 | 2212D48-002D | 0.049 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-4B | 2212D48-003D | 0.037 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-5C | 2212D48-004D | 0.0099 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | BW-5B | 2212D48-005D | 0.013 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-10 | 2212D48-007D | 0.0073 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | BW-5C | 2212D48-004E | 0.0088 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-10 | 2212D48-007E | 0.0069 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-44 | 2212D48-006D | 0.014 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | BW-4B | 2212D48-003D | 0.0065 | 0.010 | mg/L | U | MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-082-003 Task: 0002 | Sample Start Date: 12/27/2022 |
| Date Validated: 02/14/2023 | Sample End Date: 12/27/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212E09 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-27-22 | 2212e09-001 |
| OW-50 | 2212e09-002 |
| OW-52 | 2212e09-003 |
| OW-29 | 2212e09-004 |
| OW-54 | 2212e09-005 |
| OW-66 | 2212e09-006 |
| OW-55 | 2212e09-007 |
| FB-12-27-22 | 2212e09-008 |
| Dup-12-27-22 | 2212e09-009 |
| Trip Blank | 2212e09-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Trip, Field, and Equipment Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: 1-Methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for samples OW-55 and OW-66.

Method 80156D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The trip blank sample was received by the laboratory, but the parameters requested were not indicated on the CoC. The laboratory logged in the sample and performed the appropriate volatile analyses. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|--------------|---------------------------------|-----------------|
| 8015D | OW-66, OW-55 | TPH DRO and MRO | 2 |
| 8260B | OW-29 | Select VOCs | 2 |
| 200.7 | OW-66 | Total and Dissolved Barium | 5 |
| 200.8 | OW-54 | Total Lead | 5 |
| 8260B | OW-54 | Select VOCs | 5 |
| 8260B | OW-29 | MTBE | 20 |
| 8015D | OW-66, OW-55 | TPH GRO | 50 |
| 8260B | OW-54 | MTBE | 50 |
| 8260B | OW-66, OW-55 | Select VOCs | 50 |
| 8260B | OW-66 | Benzene, Toluene, Total Xylenes | 500 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.2°C and 4.6°C as noted on Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 2.5°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|----------------|-------|---------------|
| 200.7 | Total Zinc | 72409 | 0.0045 mg/L |
| 200.8 | Total Antimony | 72409 | 0.00062 mg/L |
| 245.1 | Mercury | 72446 | 0.000099 mg/L |
| 8015D | TPH DRO | 72386 | 0.10 mg/L |

Detections of total zinc, total and dissolved mercury, and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total zinc, total mercury, and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples and results greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|-----------------------|
| 200.7 | Total Metals | 72409 | Not Prepared |
| 200.7 | Dissolved Zinc | A93838 | OW-52 |
| 200.7 | Dissolved Metals | B93766 | Not Prepared |
| 200.8 | Total Metals | 72409 | OW-50, EB-12-27-22 |
| 200.8 | Dissolved Metals | A93855 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 72446 | Not Prepared |
| 504.1 | EDB | 72358 | Not Prepared |
| 4500CN E | Cyanide | WG1980984 | Not Associated |
| 4500CN E | Cyanide | WG1981929 | OW-55, Not Associated |
| 8015D | TPH DRO and MRO | 72386 | Not Prepared |
| 8015D | TPH GRO | R93693 | OW-66 |
| 8260B | VOCs | R93710 | Not Prepared |
| 8270C SIM | SVOCs | 72347 | Not Prepared |
| 8270C | SVOCs | R93725 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation or laboratory QC limits, with the following exception.

The recovery for TPH GRO in the MS for Method 8015D batch R93693 was outside the QC limits of 70-130% at 43.0%. Detections of TPH GRO in the associated samples were qualified as J-, and non-detections were qualified as UJ due to evidence of potential low bias.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits |
|--------|------------------|--------|--------------|---------------|--------------------|
| 200.7 | Total Cobalt | 72409 | 140% | ----- | 70-130% |
| 200.7 | Total Nickel | 72409 | 139% | ----- | 70-130% |
| 200.7 | Dissolved Nickel | B93766 | 68.9% | ----- | 70-130% |
| 200.8 | Total Selenium | 72409 | 69.0% | ----- | 70-130% |
| 245.1 | Mercury | 72446 | 144% | ----- | 70-130% |

Detections of total cobalt, total nickel, and mercury were assigned J+ qualifiers due to evidence of potential high bias. Non-detections of total cobalt and mercury in the associated samples did not require qualification.

Detections of dissolved nickel and total selenium were assigned J- qualifiers, and non-detections of dissolved nickel and total selenium were qualified as UJ due to evidence of potential low bias.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C analysis of sample OW-66 since only the recovery for the surrogate 2-fluorophenol was outside laboratory limits of 15-84.5% at 0%, and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-27-22, and one equipment blank sample, EB-12-27-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration (mg/L)</u> |
|------------------------|---------------|---------------------------|-----------------------------|
| EB-12-27-22 | 8015D | TPH DRO | 0.041 |
| EB-12-27-22 | 200.7 | Dissolved Vanadium | 0.0017 |
| EB-12-27-22 | 245.1 | Total Mercury | 0.000099 |
| EB-12-27-22 | 245.1 | Dissolved Mercury | 0.00010 |

Detections of dissolved vanadium in the associated samples that were less than the applicable reporting limits were assigned U qualifiers.

The TPH DRO results in Method 8015D batch 72386 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank detection was not required.

The total and dissolved mercury results in Method 245.1 batch 72446 were previously qualified due to laboratory blank detections; therefore, additional qualification due to the equipment blank detections was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample Dup-12-27-22 was collected as a field duplicate of sample OW-50.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? Yes

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1980984 from samples not associated with this data set, and the analysis of cyanide in batch WG1981929 from sample OW-66 and from a sample not associated with this data set.

The RPD for the laboratory duplicate prepared from project sample OW-66 was within laboratory acceptance limits

The RPD value for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-52 | Mercury | 0.000097 | 0.00012 |
| OW-54 | Arsenic | 0.0040 | 0.0054 |
| OW-55 | Arsenic | 0.0059 | 0.0095 |
| OW-50 | Barium | 0.052 | 0.053 |
| OW-52 | Barium | 0.027 | 0.028 |
| OW-29 | Barium | 0.086 | 0.091 |
| DUP-12-27-22 | Barium | 0.049 | 0.053 |
| DUP-12-27-22 | Selenium | ND | 0.0017 |
| OW-29 | Selenium | 0.0012 | 0.0069 |
| OW-50 | Selenium | ND | 0.0019 |
| OW-52 | Selenium | ND | 0.0012 |
| OW-54 | Selenium | 0.0028 | 0.0092 |
| OW-66 | Selenium | 0.0018 | 0.0059 |
| EB-12-27-22 | Vanadium | ND | 0.0017 |
| OW-50 | Vanadium | ND | 0.0025 |
| OW-52 | Vanadium | ND | 0.0027 |
| OW-29 | Vanadium | ND | 0.0025 |
| DUP-12-27-22 | Vanadium | ND | 0.0021 |
| OW-50 | Zinc | 0.0044 | 0.0073 |
| OW-52 | Zinc | 0.0092 | 0.014 |
| OW-29 | Zinc | ND | 0.024 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-50
Field Duplicate Sample ID: DUP-12-27-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| MTBE | SW8260B | 69 µg/L | 64 µg/L | 7.5% |
| TPH GRO | SW8015 | 0.062 mg/L | 0.063 mg/L | 1.6% +/-RL |
| TPH DRO | SW8015 | 0.023 mg/L | 0.059 mg/L | 87.8% +/-RL |
| Barium, Dissolved | E 200.7 | 0.053 mg/L | 0.053 mg/L | 0.0% |
| Barium, Total | E 200.7 | 0.052 mg/L | 0.049 mg/L | 5.9% |
| Vanadium, Dissolved | E 200.7 | 0.0025 mg/L | 0.0021 mg/L | 17.4% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0073 mg/L | ND (0.010 mg/L) | DL |
| Zinc, Total | E 200.7 | 0.0044 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0028 mg/L | 0.0026 mg/L | 7.4% |
| Arsenic, Total | E200.8 | 0.0023 mg/L | 0.0021 mg/L | 9.1% |
| Mercury, Dissolved | E245.1 | 0.00010 mg/L | 0.00010 mg/L | 0.0% +/-RL |
| Mercury, Total | E245.1 | 0.00010 mg/L | 0.00011 mg/L | 9.5% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|--|
| EBD | Equipment blank detection |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-MS | The MS and/or MSD percent recovery was less than the lower acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|--------------------|
| 1,4-Dioxane | SW8270C | OW-29 | 2212E09-004C | 0.86 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-54 | 2212e09-005c | 0.84 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-54 | 2212e09-005c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | OW-66 | 2212E09-006C | 0.24 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-55 | 2212E09-007C | 0.22 | 0.30 | µg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-52 | 2212E09-003E | 0.00096 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-52 | 2212E09-003D | 0.00045 | 0.0010 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | OW-54 | 2212E09-005D | 0.0012 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | OW-66 | 2212E09-006D | 0.00076 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | OW-55 | 2212E09-007D | 0.0018 | 0.0020 | mg/L | J | MDLRL |
| Cobalt, Dissolved | E 200.7 | OW-55 | 2212E09-007E | 0.0057 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-54 | 2212E09-005D | 0.085 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-55 | 2212E09-007D | 0.036 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-66 | 2212E09-006D | 0.0040 | 0.0060 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-12-27-22 | 2212E09-001E | 0.00010 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-50 | 2212E09-002E | 0.00010 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|--------------------|
| Mercury, Dissolved | E245.1 | OW-52 | 2212E09-003E | 0.00012 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-54 | 2212E09-005E | 0.000099 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | OW-66 | 2212E09-006E | 0.00010 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Dissolved | E245.1 | Dup-12-27-22 | 2212E09-009E | 0.00010 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-54 | 2212E09-005D | 0.00023 | 0.00020 | mg/L | JB | HR-LCS, MBD |
| Mercury, Total | E245.1 | EB-12-27-22 | 2212E09-001D | 0.000099 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-50 | 2212E09-002D | 0.00010 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-52 | 2212E09-003D | 0.000097 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-29 | 2212E09-004D | 0.000097 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-66 | 2212E09-006D | 0.00012 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | OW-55 | 2212E09-007D | 0.00011 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Mercury, Total | E245.1 | Dup-12-27-22 | 2212E09-009D | 0.00011 | 0.00020 | mg/L | U | HR-LCS, MBD, MDLRL |
| Nickel, Dissolved | E 200.7 | OW-29 | 2212E09-004E | 0.028 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-54 | 2212E09-005E | 0.21 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-66 | 2212E09-006E | 0.30 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-55 | 2212E09-007E | 0.22 | 0.010 | mg/L | J- | LR-LCS |
| Nickel, Dissolved | E 200.7 | EB-12-27-22 | 2212E09-001E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-50 | 2212E09-002E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | OW-52 | 2212E09-003E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Dissolved | E 200.7 | Dup-12-27-22 | 2212E09-009E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-29 | 2212E09-004D | 0.029 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-54 | 2212E09-005D | 0.23 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-66 | 2212E09-006D | 0.33 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-55 | 2212E09-007D | 0.25 | 0.010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | OW-29 | 2212E09-004D | 0.0012 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-54 | 2212E09-005D | 0.0028 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-66 | 2212E09-006D | 0.0018 | 0.0010 | mg/L | J- | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| Selenium, Total | E200.8 | OW-55 | 2212E09-007D | 0.0048 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | EB-12-27-22 | 2212E09-001D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Total | E200.8 | OW-50 | 2212E09-002D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Total | E200.8 | OW-52 | 2212E09-003D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Selenium, Total | E200.8 | Dup-12-27-22 | 2212E09-009D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| TPH DRO | SW8015 | OW-29 | 2212E09-004C | 0.43 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-12-27-22 | 2212E09-001C | 0.041 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-50 | 2212E09-002C | 0.023 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-52 | 2212E09-003C | 0.045 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | Dup-12-27-22 | 2212E09-009C | 0.059 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | OW-50 | 2212e09-002a | 0.062 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OW-29 | 2212e09-004a | 2.7 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OW-54 | 2212e09-005a | 1.4 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OW-66 | 2212e09-006a | 240 | 2.5 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | OW-55 | 2212e09-007a | 27 | 2.5 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | Dup-12-27-22 | 2212e09-009a | 0.063 | 0.050 | mg/L | J- | LR-MS |
| TPH GRO | SW8015 | EB-12-27-22 | 2212e09-001a | ND | 0.050 | mg/L | UJ | LR-MS |
| TPH GRO | SW8015 | OW-52 | 2212e09-003a | ND | 0.050 | mg/L | UJ | LR-MS |
| Vanadium, Dissolved | E 200.7 | OW-50 | 2212E09-002E | 0.0025 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-52 | 2212E09-003E | 0.0027 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-29 | 2212E09-004E | 0.0025 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-54 | 2212E09-005E | 0.0051 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-66 | 2212E09-006E | 0.0062 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-55 | 2212E09-007E | 0.0057 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | Dup-12-27-22 | 2212E09-009E | 0.0021 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-12-27-22 | 2212E09-001E | 0.0017 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-54 | 2212E09-005D | 0.027 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Total | E 200.7 | OW-66 | 2212E09-006D | 0.027 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-55 | 2212E09-007D | 0.036 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-50 | 2212E09-002E | 0.0073 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-54 | 2212E09-005E | 0.0058 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-66 | 2212E09-006E | 0.0070 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-55 | 2212E09-007E | 0.0041 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-54 | 2212E09-005D | 0.023 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | OW-66 | 2212E09-006D | 0.012 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | OW-55 | 2212E09-007D | 0.040 | 0.010 | mg/L | JB | MBD |
| Zinc, Total | E 200.7 | OW-50 | 2212E09-002D | 0.0044 | 0.010 | mg/L | U | MBD, MDLRL |
| Zinc, Total | E 200.7 | OW-52 | 2212E09-003D | 0.0092 | 0.010 | mg/L | U | MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-082-003 Task: 0002 | Sample Start Date: 12/28/2022 |
| Date Validated: 02/15/2023 | Sample End Date: 12/28/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212E57 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-28-22 | 2212E57-001 |
| OW-13 | 2212E57-002 |
| OW-56 | 2212E57-003 |
| OW-59 | 2212E57-004 |
| OW-67 | 2212E57-005 |
| OW-68 | 2212E57-006 |
| OW-60 | 2212E57-007 |
| FB-12-28-22 | 2212E57-008 |
| Dup-12-28-22 | 2212E57-009 |
| Trip Blank | 2212E57-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ⊗ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Trip, Field, and Equipment Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 630 data points. The data completeness calculation does not include any submitted blank sample results. Twenty-one data points were rejected. The data completeness measure for this data package is calculated to be 96.67% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 80156D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B". The laboratory control spike for DRO/MRO had an elevated recovery for OW-67, OW-68, OW60, and Dup-12-28-22.

Method 80156D GRO: The surrogate recoveries for OW-56, OW59, OW67, OW 68, and OW60 all had elevated surrogate recoveries because of matrix interference. A large peak was detected at the same retention time as the surrogate.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

E – Above quantitation range / estimated value. *This flag was mistakenly applied according to the results reported.*

J – Analyte detected below quantitation limits.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

The trip blank sample was received by the laboratory, but the parameters requested were not indicated on the CoC. The laboratory logged in the sample and performed the appropriate volatile analyses. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|---------------------|-------------------------|-----------------|
| 200.7 | OW-60 | Dissolved Metals | 5 |
| 200.8 | OW-67 | Select Dissolved Metals | 5 |
| 200.8 | OW-59, OW-67, OW-68 | Total Metals | 5 |
| 200.7 | Dup-12-28-22 | Dissolved Metals | 10 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.2°C to 1.1°C as noted on Sample Log-in Check List and on the CoC. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 1.6°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|----------------|-------|---------------|
| 200.7 | Total Zinc | 72409 | 0.0045 mg/L |
| 200.8 | Total Antimony | 72409 | 0.00062 mg/L |
| 8015D | TPH DRO | 72386 | 0.10 mg/L |
| 8015D | TPH DRO | 72395 | 0.10 mg/L |

Detections of total zinc and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total zinc and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of these analytes in the associated samples and results greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|-----------------------|
| 200.7 | Total Metals | 72409 | EB-12-28-22, OW-13 |
| 200.7 | Dissolved Metals | A93838 | Not Prepared |
| 200.7 | Dissolved Cobalt | A94009 | Not Prepared |
| 200.7 | Dissolved Metals | B93766 | Not Prepared |
| 200.7 | Dissolved Metals | C93766 | OW-56 |
| 200.8 | Total Metals | 72409 | Not Prepared |
| 200.8 | Dissolved Metals | A93877 | Not Prepared |
| 200.8 | Dissolved Metals | B93855 | EB-12-28-22, OW-13 |
| 245.1 | Total and Dissolved Mercury | 72553 | Dup-12-28-22 |
| 504.1 | EDB | 72430 | Not Prepared |
| 4500CN E | Cyanide | WG1981929 | Not Associated, OW-13 |
| 8015D | TPH DRO and MRO | 72386 | Not Prepared |
| 8015D | TPH DRO and MRO | 72395 | Not Prepared |
| 8015D | TPH GRO | R93693 | Not Prepared |
| 8260B | VOCs | R93727 | Not Prepared |
| 8260B | VOCs | R93747 | Not Prepared |
| 8270C SIM | SVOCs | 72406 | Not Prepared |
| 8270C | SVOCs | 72406 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation or laboratory QC limits, with the following exception.

The MS percent recovery for total zinc in Method 200.7 batch 72409 was outside the QC limits of 75-125% at 127%. Detections of total zinc in the associated samples were assigned J+ qualifiers due to evidence of potential high bias. Non-detections of total zinc in the associated samples did not require qualification based on this non-conformance. The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|--------|------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Cobalt | 72409 | 140% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Nickel | 72409 | 139% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Nickel | B93766 | 68.9% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 72409 | 69.0% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 72395 | 138% | Acceptable | 31.2-125% | 25.2% | 20% |

Detections of total cobalt, total nickel, and TPH DRO in the associated samples were assigned J+ qualifiers due to evidence of potential high bias. Non-detections of total cobalt and total nickel in the associated samples did not require qualification.

Detections of total selenium were assigned J- qualifiers, and non-detections of dissolved nickel and total selenium were qualified as UJ due to evidence of potential low bias.

TPH DRO was detected in the associated samples, and these results were qualified as J due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|--------|--------------------|-----------|
| 8015D | BFB | OW-56 | 551% | 70-130% |
| 8260B | Dibromofluoromethane | OW-56 | 144% | 70-130% |
| 8015D | BFB | OW-59 | 5,320% | 70-130% |
| 8270C | 2-Fluorophenol | OW-59 | 9.65% | 15-84.5% |
| 8270C | 2,4,6-Tribromophenol | OW-59 | 5.51% | 15-108% |
| 8015D | BFB | OW-67 | 607% | 70-130% |
| 8270C | 2-Fluorophenol | OW-67 | 1.92% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-67 | 6.32% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | OW-67 | 2.88% | 15-108% |
| 8015D | BFB | OW-68 | 2,720% | 70-130% |
| 8270C | 2-Fluorophenol | OW-68 | 3.37% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-68 | 10.7% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | OW-68 | 5.87% | 15-108% |
| 8015D | BFB | OW-60 | 134% | 70-130% |
| 8270C | 2-Fluorophenol | OW-60 | 12.2% | 15-84.5% |
| 8270C | 2,4,6-Tribromophenol | OW-60 | 7.99% | 15-108% |

TPH GRO was detected in the Method 8015D analysis of samples OW-56, OW-59, OW-67, and OW-68, and these results were assigned J+ qualifiers due to evidence of potential high bias. TPH GRO was not detected in sample OW-60, and qualification of data was not required.

Since Method 8260B surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes when one or more surrogates was outside the acceptance range. **The associated target analytes in sample OW-56 with the surrogate dibromofluoromethane recovery that was greater than the upper laboratory QC limit were qualified as J+ if detected in affected samples due to potential high bias.** Qualification was not required for non-detected analytes associated with this surrogate.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. **The analytes in the acid fraction of samples OW-59, OW-67, OW-68, and OW-60 were not detected. Since the recoveries of at least 2 of 3 surrogates in samples OW-59, OW-67, and OW-68 were less than 10%, the results for the associated acid fraction analytes were assigned R qualifiers to indicate rejected (not usable) data based on evidence of extreme low bias. Only 1 of 3 acid fraction surrogates was less than 10% for sample OW-60; therefore, the associated acid fraction analytes were assigned UJ qualifiers due to evidence of potential low bias.**

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit?

Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-28-22, and one equipment blank sample, EB-12-28-22, were collected as part of this sample set.



VALIDATION CRITERIA CHECKLIST

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration (mg/L)</u> |
|------------------------|---------------|--------------------|-----------------------------|
| EB-12-28-22 | 200.7 | Dissolved Vanadium | 0.0020 |
| EB-12-28-22 | 245.1 | Total Mercury | 0.00018 |
| EB-12-28-22 | 245.1 | Dissolved Mercury | 0.000091 |
| EB-12-28-22 | 8015D | TPH DRO | 0.025 |

Detections of dissolved vanadium, total mercury, and dissolved mercury in the associated samples that were less than or equal to the applicable reporting limits were assigned U qualifiers. Detections of total and dissolved mercury in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results in Method 8015D batch 72386 and batch 72395 were previously qualified due to laboratory blank detections; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample Dup-12-28-22 was collected as a field duplicate of sample OW-13.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1981929 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)?

N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results?

No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-13 | Mercury | 0.00017 | 0.00020 |
| OW-13 | Arsenic | 0.00061 | 0.0013 |
| DUP-12-28-22 | Arsenic | 0.00067 | 0.0010 |
| OW-13 | Barium | 0.019 | 0.020 |
| DUP-12-28-22 | Barium | 0.019 | 0.022 |
| OW-59 | Beryllium | ND | 0.00072 |
| OW-13 | Selenium | ND | 0.0022 |
| OW-56 | Selenium | 0.0023 | 0.0075 |
| OW-59 | Selenium | 0.0069 | 0.019 |
| OW-67 | Selenium | 0.0067 | 0.031 |
| OW-68 | Selenium | 0.0065 | 0.017 |
| OW-60 | Selenium | 0.016 | 0.034 |
| DUP-12-28-22 | Selenium | 0.0011 | 0.0022 |
| OW-59 | Silver | ND | 0.0028 |
| OW-67 | Silver | ND | 0.014 |
| OW-68 | Silver | ND | 0.0065 |
| EB-12-28-22 | Vanadium | ND | 0.0020 |
| OW-13 | Vanadium | ND | 0.0040 |
| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
| OW-60 | Vanadium | 0.011 | 0.015 |
| OW-13 | Zinc | ND | 0.016 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-13
Field Duplicate Sample ID: DUP-12-28-22 | | | | |
|--|---------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.020 mg/L | 0.022 mg/L | 9.5% |
| Barium, Total | E 200.7 | 0.019 mg/L | 0.019 mg/L | 0.0% |
| Vanadium, Dissolved | E 200.7 | 0.0040 mg/L | ND (0.50 mg/L) | DL |
| Zinc, Dissolved | E 200.7 | 0.016 mg/L | ND (0.10 mg/L) | DL |
| Zinc, Total | E 200.7 | ND (0.010 mg/L) | 0.0068 mg/L | DL |
| Arsenic, Dissolved | E200.8 | 0.0013 mg/L | 0.0010 mg/L | 26.1% +/-RL |
| Arsenic, Total | E200.8 | 0.00061 mg/L | 0.00067 mg/L | 9.4% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0022 mg/L | 0.0022 mg/L | 0.0% |
| Selenium, Total | E200.8 | ND (0.0010 mg/L) | 0.0011 mg/L | DL |
| Mercury, Dissolved | E245.1 | 0.00020 mg/L | ND (0.00020 mg/L) | DL |
| Mercury, Total | E245.1 | 0.00017 mg/L | ND (0.00020 mg/L) | DL |
| TPH DRO | SW8015 | 0.061 mg/L | 0.059 mg/L | 3.3% +/-RL |
| TPH GRO | SW8015 | 0.098 mg/L | 0.094 mg/L | 4.2% +/-RL |
| MTBE | SW8260B | 97 µg/L | 99 µg/L | 2.0% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPDLCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| HR-MS | The MS and/or MSD percent recovery was greater than the upper acceptable limit indicating possible matrix interference. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | OW-56 | 2212e57-003a | 1.4 | 1.0 | µg/L | J+ | HR-SUR |
| 1,2-Dichloroethane | SW8260B | OW-56 | 2212e57-003a | 5.2 | 1.0 | µg/L | J+ | HR-SUR |
| 1,4-Dioxane | SW8270C | OW-56 | 2212e57-003c | 0.22 | 1.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-59 | 2212E57-004C | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-67 | 2212e57-005c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-68 | 2212e57-006c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | OW-60 | 2212e57-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-59 | 2212E57-004C | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-67 | 2212e57-005c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-68 | 2212e57-006c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-60 | 2212e57-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-59 | 2212E57-004C | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-67 | 2212e57-005c | ND | 20 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2,4-Dinitrophenol | SW8270C | OW-68 | 2212e57-006c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-60 | 2212e57-007c | ND | 20 | µg/L | UJ | LR-SUR |
| 2-Methylphenol | SW8270C | OW-59 | 2212E57-004C | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-67 | 2212e57-005c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-68 | 2212e57-006c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-60 | 2212e57-007c | ND | 10 | µg/L | UJ | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-59 | 2212E57-004C | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-67 | 2212e57-005c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-68 | 2212e57-006c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-60 | 2212e57-007c | ND | 10 | µg/L | UJ | LR-SUR |
| Arsenic, Total | E200.8 | OW-13 | 2212E57-002D | 0.00061 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-59 | 2212E57-004D | 0.0048 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-67 | 2212E57-005D | 0.0034 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | Dup-12-28-22 | 2212E57-009D | 0.00067 | 0.0010 | mg/L | J | MDLRL |
| Benzene | SW8260B | OW-56 | 2212e57-003a | 1.9 | 1.0 | µg/L | J+ | HR-SUR |
| Benzoic Acid | SW8270C | OW-59 | 2212E57-004C | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-67 | 2212e57-005c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-68 | 2212e57-006c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | OW-60 | 2212e57-007c | ND | 20 | µg/L | UJ | LR-SUR |
| Beryllium, Dissolved | E 200.7 | OW-59 | 2212E57-004E | 0.00072 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Total | E 200.7 | OW-68 | 2212E57-006D | 0.0060 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | OW-56 | 2212E57-003D | 0.0073 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-59 | 2212E57-004D | 0.0087 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-67 | 2212E57-005D | 0.032 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-68 | 2212E57-006D | 0.086 | 0.0060 | mg/L | J+ | HR-LCS |
| Cobalt, Total | E 200.7 | OW-60 | 2212E57-007D | 0.0054 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Fluoranthene | SW8270C | OW-59 | 2212E57-004C | 0.14 | 0.30 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Fluorene | SW8270C | OW-68 | 2212e57-006c | 0.12 | 0.30 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-56 | 2212e57-003a | 3.0 | 1.0 | µg/L | J+ | HR-SUR |
| Lead, Dissolved | E200.8 | OW-56 | 2212E57-003E | 0.00022 | 0.0005 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-59 | 2212E57-004D | 0.0013 | 0.0025 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-56 | 2212E57-003E | 0.00022 | 0.00020 | mg/L | JB | EBD |
| Mercury, Dissolved | E245.1 | OW-13 | 2212E57-002E | 0.00020 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Dissolved | E245.1 | EB-12-28-22 | 2212E57-001E | 0.000091 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-56 | 2212E57-003D | 0.00029 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | OW-13 | 2212E57-002D | 0.00017 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | EB-12-28-22 | 2212E57-001D | 0.00018 | 0.00020 | mg/L | J | MDLRL |
| MTBE | SW8260B | OW-56 | 2212e57-003a | 14 | 1.0 | µg/L | J+ | HR-SUR |
| Nickel, Dissolved | E 200.7 | EB-12-28-22 | 2212E57-001E | ND | 0.010 | mg/L | UJ | LR-LCS |
| Nickel, Total | E 200.7 | OW-56 | 2212E57-003D | 0.078 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-59 | 2212E57-004D | 0.044 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-67 | 2212E57-005D | 0.12 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Total | E 200.7 | OW-68 | 2212E57-006D | 0.2 | 0.010 | mg/L | J+ | HR-LCS |
| Phenol | SW8270C | OW-59 | 2212E57-004C | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-67 | 2212e57-005c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-68 | 2212e57-006c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | OW-60 | 2212e57-007c | ND | 20 | µg/L | UJ | LR-SUR |
| Selenium, Total | E200.8 | OW-56 | 2212E57-003D | 0.0023 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-59 | 2212E57-004D | 0.0069 | 0.0050 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-67 | 2212E57-005D | 0.0067 | 0.0050 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-68 | 2212E57-006D | 0.0065 | 0.0050 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | OW-60 | 2212E57-007D | 0.016 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | Dup-12-28-22 | 2212E57-009D | 0.0011 | 0.0010 | mg/L | J- | LR-LCS |
| Selenium, Total | E200.8 | EB-12-28-22 | 2212E57-001D | ND | 0.0010 | mg/L | UJ | LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|------------------------------|
| Selenium, Total | E200.8 | OW-13 | 2212E57-002D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Silver, Dissolved | E 200.7 | OW-59 | 2212E57-004E | 0.0028 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-56 | 2212E57-003C | 0.82 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | OW-59 | 2212E57-004C | 0.50 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-12-28-22 | 2212E57-001C | 0.025 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-13 | 2212E57-002C | 0.061 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-68 | 2212E57-006C | 1.7 | 0.064 | mg/L | J+ | ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-67 | 2212E57-005C | 0.67 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | OW-60 | 2212E57-007C | 0.15 | 0.064 | mg/L | JB | ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | Dup-12-28-22 | 2212E57-009C | 0.059 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | OW-56 | 2212e57-003a | 0.22 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-59 | 2212e57-004a | 0.26 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-67 | 2212e57-005a | 0.077 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-68 | 2212e57-006a | 0.85 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | OW-67 | 2212E57-005C | 0.060 | 0.080 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-13 | 2212E57-002E | 0.004 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-56 | 2212E57-003E | 0.0034 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-59 | 2212E57-004E | 0.0061 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-67 | 2212E57-005E | 0.0063 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-68 | 2212E57-006E | 0.012 | 0.050 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-60 | 2212E57-007E | 0.015 | 0.25 | mg/L | U | EBD, MDLRL |
| Vanadium, Dissolved | E 200.7 | EB-12-28-22 | 2212E57-001E | 0.0020 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-56 | 2212E57-003D | 0.0057 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-59 | 2212E57-004D | 0.0094 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-67 | 2212E57-005D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-68 | 2212E57-006D | 0.045 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-------------------|
| Vanadium, Total | E 200.7 | OW-60 | 2212E57-007D | 0.011 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-56 | 2212e57-003a | 2.1 | 1.5 | µg/L | J+ | HR-SUR |
| Zinc, Dissolved | E 200.7 | OW-56 | 2212E57-003E | 0.0033 | 0.010 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-68 | 2212E57-006E | 0.0069 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-56 | 2212E57-003D | 0.011 | 0.010 | mg/L | JB | HR-MS, MBD |
| Zinc, Total | E 200.7 | OW-59 | 2212E57-004D | 0.011 | 0.010 | mg/L | JB | HR-MS, MBD |
| Zinc, Total | E 200.7 | OW-68 | 2212E57-006D | 0.045 | 0.010 | mg/L | JB | HR-MS, MBD |
| Zinc, Total | E 200.7 | OW-60 | 2212E57-007D | 0.012 | 0.010 | mg/L | JB | HR-MS, MBD |
| Zinc, Total | E 200.7 | OW-67 | 2212E57-005D | 0.0073 | 0.010 | mg/L | U | HR-MS, MBD, MDLRL |
| Zinc, Total | E 200.7 | Dup-12-28-22 | 2212E57-009D | 0.0068 | 0.010 | mg/L | U | HR-MS, MBD, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-082-003 Task: 0002 | Sample Start Date: 12/29/2022 |
| Date Validated: 02/15/2023 | Sample End Date: 12/29/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Chemical Oxygen Demand (COD) by EPA Method 410.4 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Biochemical Oxygen Demand (BOD) by SM Method 5210B | |
| Laboratory Project ID: 2212F05 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-29-22 | 2212F05-001 |
| OW-30 | 2212F05-002 |
| OW-14 | 2212F05-003 |
| STP-1 to EP-2 | 2212F05-004 |
| MKTF-41 | 2212F05-005 |
| MKTF-32 | 2212F05-006 |
| FB-12-29-22 | 2212F05-007 |
| Dup-12-29-22 | 2212F05-008 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ⊗ Laboratory Qualifiers (Item 2)
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ✓ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field and Equipment Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 542 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 9223B: The sample to be analyzed for E. Coli was received on Friday 12/30/2022 and the laboratory was not accepting E. Coli samples on this day due to the New Year holiday.

Method 8015D DRO: The method blank had a low-level detection for TPH DRO. Samples with detections are flagged with a "B". The laboratory control spike for DRO / MRO had an elevated recovery.

Method 8270C SIM: The 1,4-dioxane detection for sample MKTF-32 is "E" flagged because the result is above the calibration range.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

E – Estimated value. **TPH DRO results for multiple samples and the 1,4-dioxane for sample MKTF-32 were flagged by the laboratory with the E flag. These results were detections and were assigned J qualifiers based on the laboratory flags.**

J – Analyte detected below quantitation limits.

J5 – The sample matrix interfered with the ability to make any accurate determination; spike value is high.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| Method | Sample(s) | Analyte(s) | Dilution Factor |
|--------|------------------------------|----------------------------|-----------------|
| 200.7 | OW-30, MKTF-41 | Dissolved Metals | 5 |
| 200.7 | OW-14 | Total and Dissolved Barium | 5 |
| 200.8 | MKTF-41 | Dissolved Arsenic | 5 |
| 8260B | OW-30, MKTF-32, Dup-12-29-22 | MTBE | 10 |
| 8015D | OW-14 | TPH GRO | 50 |
| 8260B | OW-14 | Select VOCs | 50 |
| 8260B | OW-14 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.5°C and 2.2°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 5.0°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | No |
| <p>Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exception.</p> <p>TPH DRO was detected in the laboratory blank for Method 8015D batch 72395 at a concentration of 0.10 mg/L. TPH DRO was detected in associated sample EB-12-29-22 at a concentration less than the laboratory reporting limit and the result was qualified with a U flag. TPH DRO results for the associated samples that were greater than the blank detection and the laboratory reporting limit but less than 10 times the blank concentration were qualified with a JB flag. Detections of this analyte in the associated samples greater than ten times the blank concentration did not require qualification.</p> | |



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 72410 | Not Prepared |
| 200.7 | Dissolved Metals | A93838 | Not Prepared |
| 200.7 | Dissolved Zinc | A94009 | Not Prepared |
| 200.7 | Dissolved Metals | C93766 | Not Prepared |
| 200.8 | Total Metals | 72410 | Not Prepared |
| 200.8 | Dissolved Arsenic | A93877 | Not Prepared |
| 200.8 | Dissolved Metals | B93855 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 72676 | Not Prepared |
| 410.4 | COD | WG1983632 | Not Associated |
| 504.1 | EDB | 72430 | STP-1 to EP-2 |
| 4500CN E | Cyanide | WG1982605 | Not Associated |
| 5210B | BOD | 72380 | Not Prepared |
| 8015D | TPH DRO and MRO | 72395 | Not Prepared |
| 8015D | TPH GRO | R93719 | OW-30 |
| 8260B | VOCs | R93747 | OW-30 |
| 8260B | VOCs | R93792 | Not Prepared |
| 8270C | SVOCs | 72406 | Not Prepared |
| 8270C SIM | SVOCs | 72406 | Not Prepared |
| 8270C | SVOCs | 72443 | Not Prepared |
| 8270C SIM | SVOCs | 72443 | Not Prepared |
| 8270C SIM | SVOCs | R93750 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|-------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Barium | 72410 | 145% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 72395 | 138% | Acceptable | 31.2-125% | 25.2% | 20% |
| 8270C SIM | Naphthalene | 72443 | Acceptable | Acceptable | 15-78.3% | 63.0% | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 72443 | Acceptable | Acceptable | 15-79.6% | 70.6% | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 72443 | Acceptable | Acceptable | 15-78.6% | 76.9% | 30.5% |
| 8270C SIM | Acenaphthene | 72443 | Acceptable | Acceptable | 15-92% | 70.3% | 30.5% |
| 8270C SIM | Fluorene | 72443 | Acceptable | Acceptable | 15-96% | 50.5% | 25.1% |
| 8270C SIM | Phenanthrene | 72443 | Acceptable | Acceptable | 21-103% | 28.1% | 26.4% |
| 8270C SIM | Anthracene | 72443 | Acceptable | Acceptable | 21.1-106% | 19.5% | 14.4% |
| 5210B | BOD | 72380 | 69.2% | ----- | 84.6-115.4% | ----- | ----- |

Total barium and TPH DRO were detected in associated samples, and the results were qualified as J+ based on the evidence of potential high bias. Non-detections of total barium in the associated samples did not require qualification based on the evidence of potential high bias.

The analytes with LCS/LCSD RPD values that exceeded the QC limit were assigned J qualifiers for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

The target analyte BOD was detected in associated sample STP-1 to EP-2, and the result was qualified as J- based on the evidence of potential low bias.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|-----------|-----------------------------|---------|--------------------|-----------|
| 8270C | 2-Fluorophenol | MKTF-32 | 103% | 15-84.5% |
| 8270C | Phenol-d ₅ | MKTF-32 | 71.9% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | MKTF-32 | 151% | 15-108% |
| 8270C | Nitrobenzene-d ₅ | MKTF-32 | 116% | 16.8-112% |
| 8270C | 2-Fluorobiphenyl | MKTF-32 | 106% | 15-101% |
| 8270C | 4-Terphenyl-d ₁₄ | MKTF-32 | 142% | 34.4-134% |
| 8270C | 2,4,6-Tribromophenol | OW-14 | 10.7% | 15-108% |
| 8270C SIM | Nitrobenzene-d ₅ | MKTF-32 | 113% | 15-108% |

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C analysis of sample OW-14 and the Method 8270C SIM analysis of sample MKTF-32, and qualification of sample data was not required.

The associated analytes were not detected in sample MKTF-32. Qualification of data was not required due to evidence of potential high bias.



VALIDATION CRITERIA CHECKLIST

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One field blank sample, FB-12-29-22, and one equipment blank sample, EB-12-29-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|----------------|----------------------|
| EB-9-9-22 | 200.7 | Total Zinc | 0.0065 mg/L |
| EB-9-9-22 | 200.8 | Total Selenium | 0.00090 mg/L |
| EB-9-9-22 | 8015D | TPH DRO | 0.024 mg/L |

Detections of total zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total zinc and total selenium in the associated samples that were greater than the reporting limits but less than 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batch 72395 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank detection was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample Dup-12-29-22 was collected as a field duplicate of sample OW-30.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? No

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

The RPD value for dissolved barium greatly exceeded the data validation limit of 30% at 166.2%. The reported results for dissolved barium were assigned J qualifiers for the parent and field duplicate samples, and J/UJ qualifiers for the associated samples due to evidence of extremely poor precision (RPD > 100%).

The RPD value for total cyanide exceeded the data validation limit of 30% at 72.3%. The total cyanide results for samples OW-30 and Dup-12-29-22 were assigned J qualifiers due to evidence of poor precision.



VALIDATION CRITERIA CHECKLIST

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared as summarized in the following table.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>Laboratory Duplicate Sample Source</u> |
|---------------|-----------------|--------------|---|
| 410.4 | COD | WG1983632 | Not Associated |
| 4500CN E | Cyanide | WG1982605 | Not Associated |

Not Associated – The laboratory duplicate sample source was not associated with this project.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| STP-1 to EP-2 | Antimony | ND | 0.0013 |
| OW-30 | Arsenic | 0.00085 | 0.0011 |
| OW-14 | Arsenic | 0.0023 | 0.0039 |
| STP-1 to EP-2 | Arsenic | 0.0019 | 0.0021 |
| Dup-12-29-22 | Arsenic | 0.00063 | 0.00094 |
| OW-30 | Barium | 0.12 | 0.13 |
| OW-14 | Barium | 2.0 | 2.2 |
| MKTF-41 | Barium | 0.079 | 0.082 |
| OW-30 | Beryllium | ND | 0.0029 |
| OW-14 | Nickel | 0.084 | 0.086 |
| OW-30 | Selenium | 0.0015 | 0.0065 |
| OW-14 | Selenium | ND | 0.0080 |
| MKTF-41 | Selenium | 0.027 | 0.035 |
| MKTF-32 | Selenium | 0.0020 | 0.0044 |
| Dup-12-29-22 | Selenium | ND | 0.0057 |
| STP-1 to EP-2 | Silver | ND | 0.0036 |
| OW-14 | Vanadium | ND | 0.0019 |
| STP-1 to EP-2 | Vanadium | ND | 0.0024 |
| MKTF-41 | Vanadium | 0.015 | 0.016 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-30
Field Duplicate Sample ID: Dup-12-29-22 | | | | |
|--|----------------|---------------------|--------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| MTBE | SW8260B | 910 µg/L | 1,000 µg/L | 9.4% |
| Anthracene | SW8270C | 0.26 µg/L | ND (0.30 µg/L) | DL |
| TPH GRO | SW8015 | 0.94 mg/L | 0.99 mg/L | 5.2% |
| TPH DRO | SW8015 | 2.0 mg/L | 2.4 mg/L | 18.2% |
| TPH ORO | SW8015 | 0.11 mg/L | 0.13 mg/L | 16.7% +/-RL |
| Cyanide, Total | E335.4 | 0.00727 mg/L | 0.0155 mg/L | 72.3% |
| Barium, Dissolved | E 200.7 | 0.13 mg/L | 0.012 mg/L | 166.2% |
| Barium, Total | E 200.7 | 0.12 mg/L | 0.13 mg/L | 8.0% |
| Beryllium, Dissolved | E 200.7 | 0.0029 mg/L | ND (0.0020 mg/L) | DL |
| Nickel, Dissolved | E 200.7 | 0.089 mg/L | 0.0070 mg/L | 170.8% +/-RL |
| Nickel, Total | E 200.7 | 0.098 mg/L | 0.10 mg/L | 2.0% |
| Zinc, Total | E 200.7 | ND (0.010 mg/L) | 0.0074 mg/L | DL |
| Arsenic, Dissolved | E200.8 | 0.0011 mg/L | 0.00094 mg/L | 15.7% +/-RL |
| Arsenic, Total | E200.8 | 0.00085 mg/L | 0.00063 mg/L | 29.7% +/-RL |
| Lead, Dissolved | E200.8 | 0.00025 mg/L | 0.00031 mg/L | 21.4% +/-RL |
| Lead, Total | E200.8 | 0.00067 mg/L | 0.00078 mg/L | 15.2% +/-RL |
| Selenium, Dissolved | E200.8 | 0.0065 mg/L | 0.0057 mg/L | 13.1% |
| Selenium, Total | E200.8 | 0.0015 mg/L | ND (0.0010 mg/L) | DL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>The RPD value for dissolved barium greatly exceeded the data validation limit of 30% at 166.2%. The reported results for dissolved barium were assigned J qualifiers for the parent and field duplicate samples, and J/UJ qualifiers for the results for dissolved barium in the associated samples due to evidence of extremely poor precision (RPD > 100%).</p> <p>The RPD value for total cyanide exceeded the data validation limit of 30% at 72.3%. The total cyanide results for samples OW-30 and Dup-12-29-22 were assigned J qualifiers due to evidence of poor precision.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| EBL | Flagged as estimated by the laboratory. |
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,4-Dioxane | SW8270C | MKTF-32 | 2212f05-006c | 34 | 1.0 | µg/L | J | EBL |
| 1-Methylnaphthalene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | OW-30 | 2212F05-002C | 0.26 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Anthracene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | Dup-12-29-22 | 2212F05-008E | 0.00094 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | OW-30 | 2212F05-002D | 0.00085 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | Dup-12-29-22 | 2212F05-008D | 0.00063 | 0.0010 | mg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | OW-30 | 2212F05-002E | 0.13 | 0.010 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | OW-14 | 2212F05-003E | 2.2 | 0.010 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | STP-1 to EP-2 | 2212F05-004E | 0.017 | 0.0020 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | MKTF-41 | 2212F05-005E | 0.082 | 0.010 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | MKTF-32 | 2212F05-006E | 0.0039 | 0.0020 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | Dup-12-29-22 | 2212F05-008E | 0.012 | 0.0020 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | EB-12-29-22 | 2212F05-001E | ND | 0.0020 | mg/L | UJ | ERPD-FD |
| Barium, Total | E 200.7 | OW-30 | 2212F05-002D | 0.12 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | OW-14 | 2212F05-003D | 2.0 | 0.015 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | STP-1 to EP-2 | 2212F05-004D | 0.02 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-41 | 2212F05-005D | 0.079 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-32 | 2212F05-006D | 0.11 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | Dup-12-29-22 | 2212F05-008D | 0.13 | 0.0030 | mg/L | J+ | HR-LCS |
| Beryllium, Dissolved | E 200.7 | OW-30 | 2212F05-002E | 0.0029 | 0.010 | mg/L | J | MDLRL |
| Biochemical Oxygen Demand | SM 5210 | STP-1 to EP-2 | 2212F05-004G | 400 | 2.0 | mg/L | J- | LR-LCS |
| Cyanide, Total | E335.4 | OW-30 | 2212F05-002F | 0.00727 | 0.00500 | mg/L | J | ERPD-FD |
| Cyanide, Total | E335.4 | Dup-12-29-22 | 2212F05-008F | 0.0155 | 0.00500 | mg/L | J | ERPD-FD |
| Fluorene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | OW-30 | 2212F05-002E | 0.00025 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | Dup-12-29-22 | 2212F05-008E | 0.00031 | 0.00050 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|------------------------------|
| Naphthalene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Nickel, Dissolved | E 200.7 | Dup-12-29-22 | 2212F05-008E | 0.0070 | 0.010 | mg/L | J | MDLRL |
| Phenanthrene | SW8270C | MKTF-41 | 2212f05-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | MKTF-32 | 2212f05-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Phenanthrene | SW8270C | Dup-12-29-22 | 2212f05-008c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Selenium, Total | E200.8 | OW-30 | 2212F05-002D | 0.0015 | 0.0010 | mg/L | JB | EBD |
| Selenium, Total | E200.8 | STP-1 to EP-2 | 2212F05-004D | 0.0024 | 0.0010 | mg/L | JB | EBD |
| Selenium, Total | E200.8 | MKTF-32 | 2212F05-006D | 0.0020 | 0.0010 | mg/L | JB | EBD |
| Selenium, Total | E200.8 | EB-12-29-22 | 2212F05-001D | 0.00090 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | STP-1 to EP-2 | 2212F05-004E | 0.0036 | 0.005 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | EB-12-29-22 | 2212F05-001C | 0.024 | 0.064 | mg/L | U | ERPD-LCS, HR-LCS, MBD, MDLRL |
| TPH DRO | SW8015 | OW-30 | 2212F05-002C | 2.0 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | OW-14 | 2212F05-003C | 3.4 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | Dup-12-29-22 | 2212F05-008C | 2.4 | 0.064 | mg/L | J+ | EBL, ERPD-LCS, HR-LCS |
| TPH DRO | SW8015 | STP-1 to EP-2 | 2212F05-004C | 0.65 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-41 | 2212F05-005C | 1.0 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| TPH DRO | SW8015 | MKTF-32 | 2212F05-006C | 0.19 | 0.064 | mg/L | JB | EBL, ERPD-LCS, HR-LCS, MBD |
| Vanadium, Dissolved | E 200.7 | OW-14 | 2212F05-003E | 0.0019 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | STP-1 to EP-2 | 2212F05-004E | 0.0024 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-41 | 2212F05-005E | 0.016 | 0.25 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-41 | 2212F05-005D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-32 | 2212F05-006D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | STP-1 to EP-2 | 2212F05-004D | 0.028 | 0.010 | mg/L | JB | EBD |
| Zinc, Total | E 200.7 | MKTF-32 | 2212F05-006D | 0.012 | 0.010 | mg/L | JB | EBD |
| Zinc, Total | E 200.7 | OW-14 | 2212F05-003D | 0.0066 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | MKTF-41 | 2212F05-005D | 0.0049 | 0.010 | mg/L | U | EBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Zinc, Total | E 200.7 | Dup-12-29-22 | 2212F05-008D | 0.0074 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Total | E 200.7 | EB-12-29-22 | 2212F05-001D | 0.0065 | 0.010 | mg/L | J | MDLRL |



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 12/06/2022 |
| Date Validated: 02/14/2023 | Sample End Date: 12/06/2022 |
| Parameters Included: <ul style="list-style-type: none"> • Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B • 1,2-Dibromoethane (EDB) by EPA Method 504.1 • Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) • Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D • TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified • Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 • Total and Dissolved Mercury by EPA Method 245.1 • Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212303 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-6-22 | 2212303-001 |
| MKTF-46 | 2212303-002 |
| MKTF-18R | 2212303-003 |
| MKTF-16 | 2212303-004 |
| PW-3 | 2212303-005 |
| East LDU | 2212303-006 |
| West LDU | 2212303-007 |
| FB-12-6-22 | 2212303-008 |
| DUP-12-6-22 | 2212303-009 |
| MKTF-38 | 2212303-010 |
| Trip Blank | 2212303-011 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 661 data points. The data completeness calculation does not include any submitted blank sample results. Data points were not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: 1-Methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for sample MKTF-18R

Method 8015D DRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

2. Were the data free of data qualification flags and/or notes used by the laboratory? No

If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

J – Analyte detected below quantitation limits.

J4 – The associated batch QC was outside the established quality control range for accuracy.

R – %RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC record from field to laboratory was not complete, but custody was maintained as evidenced by laboratory personnel signatures, dates, times of receipt, and the CoC confirmation letter (Attachment A). Custody seals were not present nor required on the coolers because the samples were transferred to a Hall Environmental Field Service courier for delivery to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------------------|-----------------------------------|------------------------|
| 200.7 | MKTF-18R, East LDU, West LDU | Select Total and Dissolved Metals | 5 |
| 200.8 | DUP-12-6-22, MKTF-38 | Select Dissolved Metals | 5 |
| 8260B | MKTF-16 | VOCs | 5 |
| 8260B | MKTF-18R | Select VOCs | 10 |
| 8015D | MKTF-18R | TPH GRO | 10 |
| 8260B | MKTF-18R | Benzene | 100 |

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.2°C and 1.3°C as noted on the Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 0.4°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken and/or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

Yes

Comments: Detailed calibration information was not provided as part of this laboratory report but limited initial calibration summary data were available for Method 4500CN E.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

Yes

Comments: The available initial calibration summary data were within the acceptance limits.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|--------------------|--------|---------------|
| 200.7 | Dissolved Barium | B93514 | 0.0013 mg/L |
| 200.8 | Dissolved Antimony | A93132 | 0.0012 mg/L |
| 8015D | TPH DRO | 71994 | 0.15 mg/L |

Detections of the identified analytes in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved barium and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|----------------------|
| 200.7 | Total Metals | 71965 | Not Prepared |
| 200.7 | Dissolved Metals | B93514 | DUP-12-6-22, MKTF-38 |
| 200.8 | Total Metals | 71965 | Not Prepared |
| 200.8 | Dissolved Metals | A93132 | EB-12-6-22, MKTF-46 |
| 200.8 | Dissolved Metals | A93305 | Not Prepared |
| 200.8 | Dissolved Lead | A93335 | MKTF-46 |
| 200.8 | Dissolved Metals | D93335 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 72127 | East LDU |
| 504.1 | EDB | 71922 | Not Prepared |
| 4500CN E | Cyanide | WG1971426 | Not Associated |
| 8015D | TPH DRO and MRO | 71994 | Not Prepared |
| 8015D | TPH GRO | R93213 | Not Prepared |
| 8260B | VOCs | R93183 | Not Prepared |
| 8260B | VOCs | R93209 | MKTF-38 |
| 8270C SIM | SVOCs | 71974 | Not Prepared |
| 8270C | SVOCs | 71974 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The MS/MSD percent recoveries and RPDs for project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered, but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

The LCS recovery for cyanide in Method 4500CN E batch WG1971426 (R93762) was outside the acceptance limits of 87.1-120% at 83.8%. Cyanide was not detected in the associated samples, and these results were qualified as UJ due to evidence of potential low bias.

The reported recovery for mercury in the LCS for Method 245.1 batch 72127 was outside the acceptance limits of 70-130% at 134%. Mercury was detected in associated samples and the results were assigned J+ qualifiers due to



VALIDATION CRITERIA CHECKLIST

evidence of potential high bias. The non-detect results for mercury in associated samples did not require qualification based on this LCS non-conformity.

The RPD value for pyrene in the LCS/LCSD analyses for Method 8270C batch 71974 exceeded the laboratory limit of 11.8% at 12.3%. Pyrene was not detected in the associated samples and the results were assigned UJ qualifiers due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within QC limits, with the following exceptions.

| Method | Surrogate/ EIS | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|----------|--------------------|-----------|
| 8015D | BFB | MKTF-16 | 152% | 70-130% |
| 8015D | BFB | East LDU | 206% | 70-130% |
| 8015D | BFB | West LDU | 230% | 70-130% |
| 8015D | BFB | MKTF-38 | 149% | 70-130% |
| 8270C | 2,4,6-Tribromophenol | PW-3 | 12.3% | 15-108% |
| 8270C | Phenol-d ₅ | West LDU | 0% | 15-67% |

TPH GRO was detected in the Method 8015D analyses of samples MKTF-16, East LDU, West LDU, and MKTF-38 and these results were qualified as J+ due to evidence of a potential high bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range. This condition did not exist for the Method 8270C analyses of samples PW-3 and West LDU and qualification of sample data was not required.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-6-22, and one equipment blank sample, EB-12-6-22, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| Blank Sample ID | Method | Analyte | Concentration |
|-----------------|--------|---------------------|---------------|
| EB-12-6-22 | 200.7 | Total Chromium | 0.0027 mg/L |
| EB-12-6-22 | 200.7 | Total Cobalt | 0.0050 mg/L |
| EB-12-6-22 | 200.7 | Barium Dissolved | 0.0016 mg/L |
| EB-12-6-22 | 200.7 | Beryllium Dissolved | 0.0010 mg/L |
| EB-12-6-22 | 200.7 | Dissolved Zinc | 0.0072 mg/L |
| EB-12-6-22 | 8015D | TPH DRO | 0.037 mg/L |

Detections of dissolved beryllium and dissolved zinc in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifier. Detections of total cobalt and dissolved zinc in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples



VALIDATION CRITERIA CHECKLIST

and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

The dissolved barium and TPH DRO results for the samples in batches B93514 and 71994, respectively, were previously qualified due to laboratory blank detections; therefore, additional qualification based on the equipment blank detections was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-12-6-22 was collected as a field duplicate of sample MKTF-46.

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1971426 from a sample not associated with this data set and sample EB-12-6-22.

The RPD for the laboratory duplicate prepared from a project sample could not be calculated because both measurements were reported as not detected.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-18R | Mercury | ND | 0.00013 |
| PW-3 | Mercury | 0.00010 | 0.00011 |
| East LDU | Mercury | 0.00013 | 0.00014 |
| MKTF-46 | Antimony | ND | 0.00057 |
| MKTF-18R | Antimony | ND | 0.00061 |
| PW-3 | Antimony | ND | 0.00066 |
| MKTF-38 | Antimony | ND | 0.00085 |
| PW-3 | Arsenic | 0.0035 | 0.0038 |



VALIDATION CRITERIA CHECKLIST

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result
(mg/L)</u> | <u>Dissolved Result
(mg/L)</u> |
|------------------|----------------|--------------------------------|------------------------------------|
| West LDU | Arsenic | 0.00059 | 0.00062 |
| EB-12-6-22 | Barium | ND | 0.0016 |
| EB-12-6-22 | Beryllium | ND | 0.0010 |
| East LDU | Beryllium | 0.0012 | 0.0016 |
| West LDU | Beryllium | ND | 0.0010 |
| MKTF-38 | Beryllium | ND | 0.0019 |
| MKTF-38 | Cadmium | ND | 0.0011 |
| MKTF-46 | Selenium | ND | 0.00069 |
| West LDU | Selenium | ND | 0.00048 |
| DUP-12-6-22 | Selenium | ND | 0.00060 |
| MKTF-46 | Silver | 0.0019 | 0.0032 |
| MKTF-18R | Silver | ND | 0.0014 |
| PW-3 | Silver | 0.0033 | 0.0040 |
| DUP-12-6-22 | Silver | 0.0022 | 0.0030 |
| PW-3 | Vanadium | ND | 0.0038 |
| MKTF-38 | Vanadium | ND | 0.0038 |
| EB-12-6-22 | Zinc | ND | 0.0072 |
| MKTF-46 | Zinc | ND | 0.0080 |
| MKTF-18R | Zinc | 0.0066 | 0.19 |
| PW-3 | Zinc | 0.034 | 0.065 |
| East LDU | Zinc | 0.22 | 0.086 |
| West LDU | Zinc | 0.026 | 0.13 |
| DUP-6-22 | Zinc | ND | 0.0044 |
| MKTF-38 | Zinc | ND | 0.016 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.

FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-46
Field Duplicate Sample ID: DUP-12-6-22 | | | | |
|--|---------|-------------------|-------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Chlorobenzene | SW8260B | ND (1.0 µg/L) | 0.67 µg/L | DL |
| Methylene Chloride | SW8260B | 3.9 µg/L | ND (3.0 µg/L) | DL |
| 1,4-Dioxane | SW8270C | 0.84 µg/L | 1.1 µg/L | 26.8% +/-RL |
| TPH GRO | SW8015 | 0.033 mg/L | 0.030 mg/L | 9.5% +/-RL |
| TPH DRO | SW8015 | 0.051 mg/L | 0.077 mg/L | 40.6% +/-RL |
| Barium, Dissolved | E 200.7 | 0.042 mg/L | 0.041 mg/L | 2.4% |
| Barium, Total | E 200.7 | 0.081 mg/L | 0.087 mg/L | 7.1% |
| Cobalt, Total | E 200.7 | 0.016 mg/L | 0.016 mg/L | 0.0% |
| Silver, Dissolved | E 200.7 | 0.0032 mg/L | 0.0030 mg/L | 6.5% +/-RL |
| Silver, Total | E 200.7 | 0.0019 mg/L | 0.0022 mg/L | 14.6% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0037 mg/L | 0.0034 mg/L | 8.5% +/-RL |
| Vanadium, Total | E 200.7 | 0.0040 mg/L | 0.0044 mg/L | 9.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.0080 mg/L | 0.0044 mg/L | 58.1% +/-RL |
| Antimony, Dissolved | E200.8 | 0.00057 mg/L | ND (0.0010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.00081 mg/L | 0.00071 mg/L | 13.2% +/-RL |
| Arsenic, Total | E200.8 | 0.0011 mg/L | 0.0010 mg/L | 9.5% +/-RL |
| Lead, Total | E200.8 | 0.0011 mg/L | 0.0011 mg/L | 0.0% |
| Selenium, Dissolved | E200.8 | 0.00069 mg/L | 0.00060 mg/L | 14.0% +/-RL |
| Mercury, Dissolved | E245.1 | 0.00013 mg/L | ND (0.00020 mg/L) | DL |
| Mercury, Total | E245.1 | 0.00017 mg/L | 0.00014 mg/L | 19.4% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |

DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | West LDU | 2212303-007a | 0.85 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-46 | 2212303-002c | 0.84 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | East LDU | 2212303-006c | 0.26 | 1.0 | µg/L | J | MDLRL |
| 2,4-Dimethylphenol | SW8270C | MKTF-18R | 2212303-003c | 10 | 10 | µg/L | J | MDLRL |
| 2-Butanone | SW8260B | MKTF-38 | 2212303-010a | 3.7 | 10 | µg/L | J | MDLRL |
| Acenaphthene | SW8270C | MKTF-38 | 2212303-010c | 0.24 | 0.30 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-46 | 2212303-002E | 0.00057 | 0.0010 | mg/L | U | MBD, MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-18R | 2212303-003E | 0.00061 | 0.0010 | mg/L | U | MBD, MDLRL |
| Antimony, Dissolved | E200.8 | PW-3 | 2212303-005E | 0.00066 | 0.0010 | mg/L | U | MBD, MDLRL |
| Antimony, Dissolved | E200.8 | MKTF-38 | 2212303-010E | 0.00085 | 0.0010 | mg/L | U | MBD, MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-46 | 2212303-002E | 0.00081 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | East LDU | 2212303-006E | 0.00058 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | West LDU | 2212303-007E | 0.00062 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-12-6-22 | 2212303-009E | 0.00071 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | East LDU | 2212303-006D | 0.00079 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|----------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Total | E200.8 | West LDU | 2212303-007D | 0.00059 | 0.0010 | mg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | PW-3 | 2212303-005E | 0.012 | 0.0020 | mg/L | JB | MBD |
| Barium, Dissolved | E 200.7 | EB-12-6-22 | 2212303-001E | 0.0016 | 0.0020 | mg/L | U | MBD, MDLRL |
| Benzo(a)anthracene | SW8270C | MKTF-18R | 2212303-003c | 0.16 | 0.30 | µg/L | J | MDLRL |
| Beryllium, Dissolved | E 200.7 | East LDU | 2212303-006E | 0.0016 | 0.0020 | mg/L | U | EBD, MDLRL |
| Beryllium, Dissolved | E 200.7 | West LDU | 2212303-007E | 0.0010 | 0.0020 | mg/L | U | EBD, MDLRL |
| Beryllium, Dissolved | E 200.7 | MKTF-38 | 2212303-010E | 0.0019 | 0.0020 | mg/L | U | EBD, MDLRL |
| Beryllium, Dissolved | E 200.7 | EB-12-6-22 | 2212303-001E | 0.0010 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | East LDU | 2212303-006D | 0.0012 | 0.0020 | mg/L | J | MDLRL |
| Cadmium, Dissolved | E 200.7 | MKTF-38 | 2212303-010E | 0.0011 | 0.0020 | mg/L | J | MDLRL |
| Chlorobenzene | SW8260B | DUP-12-6-22 | 2212303-009a | 0.67 | 1.0 | µg/L | J | MDLRL |
| Chromium, Total | E 200.7 | EB-12-6-22 | 2212303-001D | 0.0027 | 0.0060 | mg/L | J | MDLRL |
| Cobalt, Total | E 200.7 | MKTF-46 | 2212303-002D | 0.016 | 0.0060 | mg/L | JB | EBD |
| Cobalt, Total | E 200.7 | MKTF-18R | 2212303-003D | 0.0097 | 0.0060 | mg/L | JB | EBD |
| Cobalt, Total | E 200.7 | PW-3 | 2212303-005D | 0.013 | 0.0060 | mg/L | JB | EBD |
| Cobalt, Total | E 200.7 | DUP-12-6-22 | 2212303-009D | 0.016 | 0.0060 | mg/L | JB | EBD |
| Cobalt, Total | E 200.7 | MKTF-38 | 2212303-010D | 0.011 | 0.0060 | mg/L | JB | EBD |
| Cobalt, Total | E 200.7 | EB-12-6-22 | 2212303-001D | 0.0050 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | EB-12-6-22 | 2212303-001F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | MKTF-46 | 2212303-002F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | MKTF-18R | 2212303-003F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | PW-3 | 2212303-005F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | East LDU | 2212303-006F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | West LDU | 2212303-007F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | DUP-12-6-22 | 2212303-009F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Cyanide, Total | E335.4 | MKTF-38 | 2212303-010F | ND | 0.0050 | mg/L | UJ | LR-LCS |
| Fluoranthene | SW8270C | MKTF-18R | 2212303-003c | 0.14 | 0.30 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|--------------------|---------|-----------------|---------------|---------|---------|-------|--------------------|-----------------|
| Fluoranthene | SW8270C | West LDU | 2212303-007c | 0.14 | 0.30 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | MKTF-16 | 2212303-004a | 3.2 | 5.0 | µg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-46 | 2212303-002E | 0.00013 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-18R | 2212303-003E | 0.00013 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | PW-3 | 2212303-005E | 0.00011 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | East LDU | 2212303-006E | 0.00014 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Dissolved | E245.1 | MKTF-38 | 2212303-010E | 0.00010 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | MKTF-46 | 2212303-002D | 0.00017 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | PW-3 | 2212303-005D | 0.00010 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | East LDU | 2212303-006D | 0.00013 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | West LDU | 2212303-007D | 0.00014 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | DUP-12-6-22 | 2212303-009D | 0.00014 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Mercury, Total | E245.1 | MKTF-38 | 2212303-010D | 0.00012 | 0.00020 | mg/L | J | HR-LCS, MDLRL |
| Methylene Chloride | SW8260B | East LDU | 2212303-006a | 2.9 | 3.0 | µg/L | J | MDLRL |
| MTBE | SW8260B | MKTF-38 | 2212303-010a | 0.91 | 1.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | MKTF-38 | 2212303-010a | 0.85 | 3.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-18R | 2212303-003E | 0.0075 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-18R | 2212303-003D | 0.0084 | 0.010 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | MKTF-18R | 2212303-003a | 5.6 | 10 | µg/L | J | MDLRL |
| Phenol | SW8270C | MKTF-18R | 2212303-003c | 19 | 20 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | West LDU | 2212303-007a | 0.64 | 1.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-12-6-22 | 2212303-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-46 | 2212303-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-18R | 2212303-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | PW-3 | 2212303-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | East LDU | 2212303-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | West LDU | 2212303-007c | ND | 1.0 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Pyrene | SW8270C | DUP-12-6-22 | 2212303-009c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-38 | 2212303-010c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| sec-Butylbenzene | SW8260B | West LDU | 2212303-007a | 0.70 | 1.0 | µg/L | J | MDLRL |
| sec-Butylbenzene | SW8260B | MKTF-38 | 2212303-010a | 0.98 | 1.0 | µg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-46 | 2212303-002E | 0.00069 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | East LDU | 2212303-006E | 0.00071 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | West LDU | 2212303-007E | 0.00048 | 0.0010 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP-12-6-22 | 2212303-009E | 0.00060 | 0.0010 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-46 | 2212303-002E | 0.0032 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-18R | 2212303-003E | 0.0014 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | PW-3 | 2212303-005E | 0.0040 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP-12-6-22 | 2212303-009E | 0.0030 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-38 | 2212303-010E | 0.0035 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | MKTF-46 | 2212303-002D | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | PW-3 | 2212303-005D | 0.0033 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | DUP-12-6-22 | 2212303-009D | 0.0022 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | MKTF-38 | 2212303-010D | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-38 | 2212303-010C | 0.43 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | DUP-12-6-22 | 2212303-009C | 0.077 | 0.064 | mg/L | U | MBD |
| TPH DRO | SW8015 | EB-12-6-22 | 2212303-001C | 0.037 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | MKTF-46 | 2212303-002C | 0.051 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | PW-3 | 2212303-005C | 0.019 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-16 | 2212303-004a | 2.1 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | East LDU | 2212303-006a | 0.52 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | West LDU | 2212303-007a | 0.31 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-38 | 2212303-010a | 0.29 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | MKTF-46 | 2212303-002a | 0.033 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | DUP-12-6-22 | 2212303-009a | 0.030 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-46 | 2212303-002E | 0.0037 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | PW-3 | 2212303-005E | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | East LDU | 2212303-006E | 0.0061 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | West LDU | 2212303-007E | 0.0051 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-12-6-22 | 2212303-009E | 0.0034 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-38 | 2212303-010E | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-46 | 2212303-002D | 0.004 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-18R | 2212303-003D | 0.0037 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-12-6-22 | 2212303-009D | 0.0044 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | West LDU | 2212303-007a | 0.88 | 1.5 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | PW-3 | 2212303-005E | 0.065 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-38 | 2212303-010E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | MKTF-46 | 2212303-002E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | DUP-12-6-22 | 2212303-009E | 0.0044 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-12-6-22 | 2212303-001E | 0.0072 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-18R | 2212303-003D | 0.0066 | 0.010 | mg/L | J | MDLRL |



ATTACHMENT A

CoC Confirmation



02/16/2023

Brittany Nelson
Trihydro Corporation
1252 Commerce Drive
Laramie, WY 82070

Chain of Custody Confirmation

I, Brittany Nelson representing the Marathon Gallup site do confirm the following information inadvertently left off the chain-of-custody (CoC) provided with data set 2212303 or information was not reported accurately in accordance with the field records. In addition, I do confirm that all aqueous samples were provided to the laboratory in the proper, method-referenced, containers and were properly preserved (chemically and physically). The information identified in bold italics will be used to further clarify the CoC documentation.

The required analytical parameters for samples MKTF-38 and Trip Blank were not noted on the CoC.

To the best of my knowledge, the above information is correct.


Brittany Nelson

2-16-23
DATE

This confirmation is an amendment to the chain-of-custody accompanying the Marathon Gallup, Hall Environmental Analysis Laboratory data set 2212303.



Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 12/07/2022 |
| Date Validated: 02/01/2023 | Sample End Date: 12/07/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E ▪ Per- and Polyfluorinated Alkyl Substances (PFAS) by Liquid Chromatography with Tandem Mass Spectrometry (LC-MS/MS) and Isotope Dilution (ID) | |
| Laboratory Project ID: 2212442 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee, and Enthalpy Analytical Laboratory of El Dorado Hills, California, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD and ongoing precision and recovery (OPR) samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD/OPR percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-7-22 | 2212442-001 |
| OW-64 | 2212442-002 |
| OW-12 | 2212442-003 |
| OW-12A | 2212442-004 |
| OW-63 | 2212442-005 |
| OW-57 | 2212442-006 |
| DUP-12-7-22 | 2212442-007 |
| FB-12-7-22 | 2212442-008 |
| EB-OW-67 | 2212442-009 |
| Trip Blank | 2212442-010 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD/OPR (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ✓ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Data review and evaluation was performed following criteria set forth in Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA Method 537, document number EPA 910-R-18-001, November 2018.
- Data were reviewed and evaluated according to criteria set forth in the Department of Defense (DoD) / Department of Energy (DOE) Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.3, 2019.
- Data were reviewed and evaluated according to criteria set forth in Data Validation Guidelines Module 3: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-15, United States Department of Defense, Environmental Data Quality Workgroup, May 2020.





Tier II Data Validation Report Summary

- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| Qualifier | Definition |
|-----------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 564 data points. The data completeness calculation does not include any submitted blank sample results. Six data points were rejected. The data completeness measure for this data package is calculated to be 98.94% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8270C and Method 8270C SIM: 1-Methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for samples OW-57 and OW-63.

Method 8015D DRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – %RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? No

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. The laboratory noted that the shipping containers were sealed, and custody seals were present and intact on the shipping containers.

The correct parameters were not marked on the CoC for the trip blank sample that was received by the laboratory. The laboratory logged in the sample and performed the appropriate volatile analysis. Validation action was not required.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|----------------------|-----------------------------------|------------------------|
| 8260B | DUP-12-7-22 | VOCs | 2 |
| 200.7 | OW-63 | Total and Dissolved Barium | 5 |
| 200.7 | OW-57 | Dissolved Barium | 5 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 8260B | OW-12A | Select VOCs | 5 |
| 8260B | OW-12 | Benzene | 10 |
| 8015D | OW-12A, OW-57 | TPH DRO and MRO | 10 |
| 8015D | OW-12A, OW-63, OW-57 | TPH GRO | 50 |
| 8260B | OW-12A | Select VOCs | 50 |
| 8260B | OW-63, OW-57 | Select VOCs | 50 |
| 200.7 | OW-57 | Total Barium | 100 |
| 8260B | OW-63, OW-57 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between 0.4°C and 1.1°C as noted on the Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 5.5°C as noted on the CoC. Samples transferred to Enthalpy Analytical Laboratory were received in good condition with the cooler temperature outside the recommended range at 0.8°C as noted on the CoC and the Sample Login Checklist.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken and/or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| <p>Comments: The samples were extracted/digested and analyzed within method-specific holding times.</p> | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| <p>Comments: The results were reported in concentration units of nanograms per liter (ng/L), micrograms per liter ($\mu\text{g/L}$), and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.</p> | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| <p>Comments: Initial and continuing calibration data were not included as part of this data set.</p> | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| <p>Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.</p> | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|------------------|--------|---------------|
| 200.7 | Total Cobalt | 71980 | 0.0048 mg/L |
| 200.7 | Dissolved Barium | B93514 | 0.0013 mg/L |
| 8015D | TPH DRO | 71994 | 0.15 mg/L |
| 8015D | TPH DRO | 72049 | 0.080 mg/L |

Detections of TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of total cobalt and TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-------------|-----------------------------|-----------|-------------------|
| 200.7 | Total Metals | 71980 | EB-12-7-22, OW-64 |
| 200.7 | Dissolved Metals | B93514 | Not Prepared |
| 200.8 | Total Metals | 71980 | Not Prepared |
| 200.8 | Dissolved Metals | A93335 | EB-12-7-22 |
| 200.8 | Dissolved Metals | A93438 | Not Prepared |
| 200.8 | Dissolved Antimony | A93556 | Not Prepared |
| 245.1 | Total and Dissolved Mercury | 72128 | OW-12 |
| 245.1 | Total Mercury | 72200 | Not Prepared |
| 504.1 | EDB | 72189 | Not Prepared |
| PFAS Method | PFAs | B22L133 | Not Prepared |
| 4500CN E | Cyanide | WG1974296 | EB-12-7-22 |
| 8015D | TPH DRO and MRO | 71994 | Not Prepared |
| 8015D | TPH DRO and MRO | 72049 | Not Prepared |
| 8015D | TPH GRO | R93213 | Not Prepared |
| 8260B | VOCs | R93331 | Not Prepared |
| 8260B | VOCs | R93377 | Not Prepared |
| 8260B | VOCs | R93479 | Not Prepared |
| 8270C SIM | SVOCs | 71974 | Not Prepared |
| 8270C | SVOCs | 71974 | Not Prepared |
| 8270C SIM | SVOCs | 72036 | Not Prepared |
| 8270C | SVOCs | 72036 | Not Prepared |
| 8270C SIM | SVOCs | R93333 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.



VALIDATION CRITERIA CHECKLIST

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS and OPR samples analyzed was equal to at least 5% of the total number of samples.

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS, LCSD and OPR percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Cobalt | 71980 | 57.1% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Antimony | 71980 | 69.4% | ----- | 70-130% | ----- | ----- |
| 200.8 | Dissolved Selenium | A93335 | 214% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 72049 | Acceptable | Acceptable | 31.2-125% | 22.7% | 20% |
| 8270C | Pyrene | 71974 | Acceptable | Acceptable | 61-123% | 12.3% | 11.8% |
| 8270C | Pyrene | 72036 | Acceptable | Acceptable | 61-123% | 17.9% | 11.8% |
| 8270C SIM | Naphthalene | 72036 | Acceptable | Acceptable | 15-78.3% | 33.3% | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 72036 | Acceptable | Acceptable | 15-79.6% | 40.0% | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 72036 | Acceptable | Acceptable | 15-78.6% | 39.1% | 30.5% |
| 8270C SIM | Acenaphthene | 72036 | Acceptable | Acceptable | 15-92% | 37.8% | 30.5% |
| 8270C SIM | Fluorene | 72036 | Acceptable | Acceptable | 15-96% | 31.4% | 25.1% |

Detections of total cobalt in the associated samples were qualified as J-, and non-detections of total cobalt and total antimony were qualified UJ due to evidence of potential low bias.

The detection of dissolved selenium in sample OW-12A was qualified as J+ due to evidence of potential high bias. Non-detections of dissolved selenium in the associated samples did not require qualification.

The analytes with LCS/LCSD RPD values that were above the QC limit were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate/extracted internal standard (EIS) recoveries were within QC limits, with the following exceptions.

| Method | Surrogate/ EIS | Sample | Surrogate Recovery | QC Limits |
|--------|------------------------------------|-------------|--------------------|-----------|
| 8015D | BFB | OW-64 | 184% | 70-130% |
| 8015D | BFB | OW-12A | 143% | 70-130% |
| 8270C | 2-Fluorophenol | OW-12A | 0% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-12A | 0% | 15-67% |
| 8015D | BFB | DUP-12-7-22 | 188% | 70-130% |
| 537 | ¹³ C ₃ PFBA | OW-63 | 35.9% | 50-150% |
| 537 | ¹³ C ₈ PFOSA | OW-63 | 42.2% | 50-150% |
| 537 | ¹³ C ₈ PFOSA | EB-OW-67 | 30.2% | 50-150% |



VALIDATION CRITERIA CHECKLIST

TPH GRO was detected in the Method 8015D analyses of samples OW-64, OW-12A, and DUP-12-7-22, and these results were assigned J+ qualifiers due to evidence of potential high bias.

Since Method 8270C and 8270C SIM surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

Since at least 2 of 3 surrogates were recovered below 10%, the associated analytes that were not detected in the acid fraction of sample OW-12A were qualified as R to indicate rejected (not usable) data based on evidence of extreme low bias. The analyte 2,4-dimethylphenol was detected in sample OW-12A, and this result was qualified as J- due to evidence of potential low bias.

PFBA and PFOSA associated with EIS ¹³C₃ PFBA and ¹³C₈ PFOSA recoveries between 20% and 50% were qualified as J+ for detections and UJ for non-detections due to the non-conforming EIS recoveries.

The TPH DRO and TPH MRO results for samples OW-12A and OW-57 were not qualified based on the surrogate non-conformances in the Method 8015D analyses since the applied dilution of 10 times resulted in surrogate concentrations below routinely calibrated levels, and those results were deemed unreliable and possibly inaccurate.

Qualification of sample data was not required based on surrogate/EIS non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-7-22, and two equipment blank samples, EB-12-7-22 and EB-OW-67, were collected as part of this sample set.

19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? No

Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exceptions.

| <u>Blank Sample ID</u> | <u>Method</u> | <u>Analyte</u> | <u>Concentration</u> |
|------------------------|---------------|----------------|----------------------|
| EB-12-7-22 | 200.7 | Dissolved Zinc | 0.0065 mg/L |
| EB-12-7-22 | 245.1 | Total Mercury | 0.000095 mg/L |
| EB-12-7-22 | 8015D | TPH DRO | 0.035 mg/L |

Detections of dissolved zinc and total mercury in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of dissolved zinc and total mercury in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples did not require qualification.

The TPH DRO results for the samples in batches 71994 and 72049 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.

20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.

Sample DUP-12-7-22 was collected as a field duplicate of sample OW-64.



VALIDATION CRITERIA CHECKLIST

21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? Yes

Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples.

22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? N/A

Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1974296 from a sample not associated with this data set and sample OW-12A.

The RPD for the laboratory duplicate prepared from a project sample could not be calculated because both measurements were reported as not detected.

The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed.

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-12A | Antimony | ND | 0.0010 |
| OW-57 | Antimony | ND | 0.0023 |
| OW-64 | Arsenic | 0.0022 | 0.0025 |
| OW-12 | Arsenic | 0.0015 | 0.0018 |
| OW-12 | Barium | 0.019 | 0.020 |
| OW-12 | Lead | ND | 0.000071 |
| OW-12A | Nickel | ND | 0.0055 |
| OW-12A | Selenium | 0.0016 | 0.0020 |
| OW-12A | Silver | ND | 0.0020 |
| OW-57 | Silver | ND | 0.0016 |
| OW-12 | Vanadium | 0.012 | 0.013 |
| EB-12-7-22 | Zinc | ND | 0.0065 |
| OW-12 | Zinc | ND | 0.011 |
| OW-12A | Zinc | 0.0056 | 0.0080 |
| OW-63 | Zinc | ND | 0.0093 |
| DUP-12-7-22 | Zinc | ND | 0.016 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-64
Field Duplicate Sample ID: DUP-12-7-22 | | | | |
|--|---------|-------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.29 mg/L | 0.30 mg/L | 3.4% |
| Barium, Total | E 200.7 | 0.30 mg/L | 0.31 mg/L | 3.3% |
| Vanadium, Dissolved | E 200.7 | 0.0048 mg/L | 0.0052 mg/L | 8.0% +/-RL |
| Vanadium, Total | E 200.7 | 0.0058 mg/L | 0.0056 mg/L | 3.5% +/-RL |
| Zinc, Dissolved | E 200.7 | ND (0.010 mg/L) | 0.016 mg/L | DL |
| Arsenic, Dissolved | E200.8 | 0.0025 mg/L | 0.0019 mg/L | 27.3% |
| Arsenic, Total | E200.8 | 0.0022 mg/L | 0.0022 mg/L | 0.0% |
| Lead, Dissolved | E200.8 | 0.000087 mg/L | 0.000060 mg/L | 36.7% +/-RL |
| Lead, Total | E200.8 | 0.00036 mg/L | 0.00032 mg/L | 11.8% +/-RL |
| Selenium, Total | E200.8 | 0.0010 mg/L | ND (0.0010 mg/L) | DL |
| TPH DRO | SW8015 | 0.54 mg/L | 0.50 mg/L | 7.7% |
| TPH GRO | SW8015 | 0.47 mg/L | 0.46 mg/L | 2.2% |
| 1,2,4-Trimethylbenzene | SW8260B | 33 µg/L | 33 µg/L | 0.0% |
| 1,3,5-Trimethylbenzene | SW8260B | 1.7 µg/L | 1.7 µg/L | 0.0% +/-RL |
| Benzene | SW8260B | 5.0 µg/L | 4.9 µg/L | 2.0% |
| Ethylbenzene | SW8260B | 20 µg/L | 20 µg/L | 0.0% |
| Isopropylbenzene | SW8260B | 5.1 µg/L | 5.3 µg/L | 3.8% |
| n-Propylbenzene | SW8260B | 2.4 µg/L | 2.3 µg/L | 4.3% |
| p-Isopropyltoluene | SW8260B | 0.95 µg/L | 1.0 µg/L | 5.1% +/-RL |
| sec-Butylbenzene | SW8260B | 1.8 µg/L | 2.0 µg/L | 10.5% +/-RL |
| Xylenes, Total | SW8260B | 2.7 µg/L | 2.4 µg/L | 11.8% +/-RL |
| 1-Methylnaphthalene | SW8270C | 0.76 µg/L | 0.92 µg/L | 19.0% |
| 2-Methylnaphthalene | SW8270C | 0.16 µg/L | ND (0.30 µg/L) | DL |
| Acenaphthene | SW8270C | ND (0.30 µg/L) | 0.18 µg/L | DL |
| Anthracene | SW8270C | 0.20 µg/L | 0.20 µg/L | 0.0% +/-RL |
| Fluoranthene | SW8270C | 0.48 µg/L | 0.58 µg/L | 18.9% +/-RL |
| Fluorene | SW8270C | 0.22 µg/L | 0.28 µg/L | 24.0% +/-RL |
| Naphthalene | SW8270C | 0.94 µg/L | 1.2 µg/L | 24.3% |
| Phenanthrene | SW8270C | 0.44 µg/L | 0.52 µg/L | 16.7% +/-RL |
| Pyrene | SW8270C | 0.34 µg/L | 0.46 µg/L | 30.0% +/-RL |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-EIS | The extracted internal standard (EIS) recovery was less than the lower acceptance limit. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,3,5-Trimethylbenzene | SW8260B | OW-12 | 2212442-003a | 0.69 | 1.0 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | DUP-12-7-22 | 2212442-007a | 1.7 | 2.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | OW-12A | 2212442-004c | 1.3 | 0.30 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-63 | 2212442-005c | 41 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | OW-57 | 2212442-006c | 58 | 5.0 | µg/L | J | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP-12-7-22 | 2212442-007c | 0.92 | 0.30 | µg/L | J | ERPD-LCS |
| 2,4,6-Trichlorophenol | SW8270C | OW-12A | 2212442-004c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-12A | 2212442-004c | 7.2 | 10 | µg/L | J- | LR-SUR, MDLRL |
| 2,4-Dinitrophenol | SW8270C | OW-12A | 2212442-004c | ND | 20 | µg/L | R | LR-SUR |
| 2-Methylnaphthalene | SW8270C | OW-64 | 2212442-002c | 0.16 | 0.30 | µg/L | J | MDLRL |
| 2-Methylnaphthalene | SW8270C | OW-12A | 2212442-004c | 0.68 | 0.30 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-63 | 2212442-005c | 58 | 5.0 | µg/L | J | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | OW-57 | 2212442-006c | 37 | 50 | µg/L | J | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| 2-Methylnaphthalene | SW8270C | DUP-12-7-22 | 2212442-007c | ND | 0.300 | µg/L | UJ | ERPD-LCS |
| 2-Methylphenol | SW8270C | OW-12A | 2212442-004c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-12A | 2212442-004c | ND | 10 | µg/L | R | LR-SUR |
| Acenaphthene | SW8270C | OW-63 | 2212442-005C | 0.74 | 0.30 | µg/L | J | ERPD-LCS |
| Acenaphthene | SW8270C | OW-12A | 2212442-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP-12-7-22 | 2212442-007c | 0.18 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Anthracene | SW8270C | OW-64 | 2212442-002c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-63 | 2212442-005C | 0.18 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | OW-57 | 2212442-006C | 0.22 | 0.30 | µg/L | J | MDLRL |
| Anthracene | SW8270C | DUP-12-7-22 | 2212442-007c | 0.20 | 0.30 | µg/L | J | MDLRL |
| Antimony, Dissolved | E200.8 | OW-57 | 2212442-006E | 0.0023 | 0.0050 | mg/L | J | MDLRL |
| Antimony, Total | E200.8 | EB-12-7-22 | 2212442-001D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | OW-64 | 2212442-002D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | OW-12 | 2212442-003D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | OW-12A | 2212442-004D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | OW-63 | 2212442-005D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | OW-57 | 2212442-006D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | DUP-12-7-22 | 2212442-007D | ND | 0.0010 | mg/L | UJ | LR-LCS |
| Arsenic, Dissolved | E200.8 | OW-57 | 2212442-006E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-12-7-22 | 2212442-007E | 0.0019 | 0.0050 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | OW-12A | 2212442-004c | ND | 20 | µg/L | R | LR-SUR |
| Cobalt, Total | E 200.7 | OW-57 | 2212442-006D | 0.058 | 0.0060 | mg/L | J- | LR-LCS |
| Cobalt, Total | E 200.7 | EB-12-7-22 | 2212442-001D | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Cobalt, Total | E 200.7 | OW-64 | 2212442-002D | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Cobalt, Total | E 200.7 | OW-12 | 2212442-003D | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Cobalt, Total | E 200.7 | DUP-12-7-22 | 2212442-007D | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Cobalt, Total | E 200.7 | OW-12A | 2212442-004D | 0.017 | 0.0060 | mg/L | JB | MBD, LR-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------------------|-----------|-----------------|---------------|----------|---------|-------|--------------------|-----------------|
| Cobalt, Total | E 200.7 | OW-63 | 2212442-005D | 0.013 | 0.0060 | mg/L | JB | MBD, LR-LCS |
| Fluoranthene | SW8270C | OW-57 | 2212442-006C | 0.14 | 0.30 | µg/L | J | MDLRL |
| Fluorene | SW8270C | OW-64 | 2212442-002c | 0.22 | 0.30 | µg/L | J | MDLRL |
| Fluorene | SW8270C | OW-63 | 2212442-005C | 1.3 | 0.30 | µg/L | J | ERPD-LCS |
| Fluorene | SW8270C | OW-12A | 2212442-004c | 0.12 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Fluorene | SW8270C | DUP-12-7-22 | 2212442-007c | 0.28 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Lead, Dissolved | E200.8 | OW-64 | 2212442-002E | 0.000087 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-12 | 2212442-003E | 0.000071 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | DUP-12-7-22 | 2212442-007E | 0.00006 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | OW-64 | 2212442-002D | 0.00036 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP-12-7-22 | 2212442-007D | 0.00032 | 0.00050 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-12 | 2212442-003E | 0.00013 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Dissolved | E245.1 | OW-57 | 2212442-006E | 0.00011 | 0.00020 | mg/L | J | MDLRL |
| Mercury, Total | E245.1 | OW-57 | 2212442-006D | 0.00031 | 0.00020 | mg/L | JB | EBD |
| Mercury, Total | E245.1 | OW-12 | 2212442-003D | 0.00013 | 0.00020 | mg/L | U | EBD, MDLRL |
| Mercury, Total | E245.1 | EB-12-7-22 | 2212442-001D | 0.000095 | 0.00020 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-12A | 2212442-004c | 3.4 | 0.30 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-63 | 2212442-005c | 140 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | OW-57 | 2212442-006c | 81 | 5.0 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | DUP-12-7-22 | 2212442-007c | 1.2 | 0.30 | µg/L | J | ERPD-LCS |
| Nickel, Dissolved | E 200.7 | OW-12A | 2212442-004E | 0.0055 | 0.010 | mg/L | J | MDLRL |
| n-Propylbenzene | SW8260B | OW-57 | 2212442-006a | 41 | 50 | µg/L | J | MDLRL |
| Perfluorobutanoic acid (PFBA) | EPA 537.1 | OW-63 | 2212442-005G | 140 | 2.03 | ng/L | J+ | LR-EIS |
| Perfluorooctane Sulfonamide (FOSA) | EPA 537.1 | OW-63 | 2212442-005G | ND | 2.03 | ng/L | UJ | LR-EIS |
| Perfluorooctane Sulfonamide (FOSA) | EPA 537.1 | EB-OW-67 | 2212442-009a | ND | 1.94 | ng/L | UJ | LR-EIS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|-----------------|
| Phenol | SW8270C | OW-12A | 2212442-004c | ND | 20 | µg/L | R | LR-SUR |
| p-Isopropyltoluene | SW8260B | OW-64 | 2212442-002a | 0.95 | 1.0 | µg/L | J | MDLRL |
| p-Isopropyltoluene | SW8260B | DUP-12-7-22 | 2212442-007a | 1.0 | 2.0 | µg/L | J | MDLRL |
| Pyrene | SW8270C | EB-12-7-22 | 2212442-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-12 | 2212442-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-12A | 2212442-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-63 | 2212442-005C | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | OW-64 | 2212442-002c | 0.34 | 1.0 | µg/L | J | ERPD-LCS, MDLRL |
| Pyrene | SW8270C | DUP-12-7-22 | 2212442-007c | 0.46 | 1.0 | µg/L | J | ERPD-LCS, MDLRL |
| Selenium, Dissolved | E200.8 | OW-12A | 2212442-004E | 0.0020 | 0.0010 | mg/L | J+ | HR-LCS |
| Silver, Dissolved | E 200.7 | OW-12A | 2212442-004E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-57 | 2212442-006E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-63 | 2212442-005a | 42 | 50 | µg/L | J | MDLRL |
| Toluene | SW8260B | OW-57 | 2212442-006a | 27 | 50 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-64 | 2212442-002C | 0.54 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | DUP-12-7-22 | 2212442-007C | 0.50 | 0.064 | mg/L | JB | ERPD-LCS, MBD |
| TPH DRO | SW8015 | EB-12-7-22 | 2212442-001C | 0.035 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-12 | 2212442-003C | 0.022 | 0.064 | mg/L | U | MBD, MDLRL |
| TPH DRO | SW8015 | OW-63 | 2212442-005C | 2.8 | 0.064 | mg/L | J | ERPD-LCS |
| TPH DRO | SW8015 | OW-57 | 2212442-006C | 5.0 | 0.64 | mg/L | J | ERPD-LCS |
| TPH GRO | SW8015 | OW-64 | 2212442-002a | 0.47 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | OW-12A | 2212442-004a | 14 | 2.5 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | DUP-12-7-22 | 2212442-007a | 0.46 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | OW-63 | 2212442-005C | ND | 0.080 | mg/L | UJ | ERPD-LCS |
| TPH ORO | SW8015 | OW-57 | 2212442-006C | ND | 0.80 | mg/L | UJ | ERPD-LCS |
| TPH ORO | SW8015 | DUP-12-7-22 | 2212442-007C | ND | 0.080 | mg/L | UJ | ERPD-LCS |
| Vanadium, Dissolved | E 200.7 | OW-64 | 2212442-002E | 0.0048 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Dissolved | E 200.7 | OW-12 | 2212442-003E | 0.013 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-57 | 2212442-006E | 0.0030 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-12-7-22 | 2212442-007E | 0.0052 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-64 | 2212442-002D | 0.0058 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-12 | 2212442-003D | 0.012 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-12-7-22 | 2212442-007D | 0.0056 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | DUP-12-7-22 | 2212442-007a | 2.4 | 3.0 | µg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | OW-12 | 2212442-003E | 0.011 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | DUP-12-7-22 | 2212442-007E | 0.016 | 0.010 | mg/L | JB | EBD |
| Zinc, Dissolved | E 200.7 | OW-12A | 2212442-004E | 0.0080 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-63 | 2212442-005E | 0.0093 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | OW-57 | 2212442-006E | 0.0099 | 0.010 | mg/L | U | EBD, MDLRL |
| Zinc, Dissolved | E 200.7 | EB-12-7-22 | 2212442-001E | 0.0065 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-12A | 2212442-004D | 0.0056 | 0.010 | mg/L | J | MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 12/08/2022 |
| Date Validated: 01/30/2023 | Sample End Date: 12/08/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212630 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Charles Ballek, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Trip blanks
- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-8-22 | 2212630-001 |
| MKTF-40 | 2212630-002 |
| MKTF-31 | 2212630-003 |
| MKTF-27 | 2212630-004 |
| MKTF-28 | 2212630-005 |
| MKTF-29 | 2212630-006 |
| DUP 12-8-22 | 2212630-007 |
| FB-12-8-22 | 2212630-008 |
| Trip Blank | 2212630-009 |





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ✓ Field, Equipment, and Trip Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Fourteen data points were rejected. The data completeness measure for this data package is calculated to be 97.41% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 8015D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

J – Analyte detected below quantitation limits.

P1 – RPD value not applicable for sample concentrations less than 5 times the reporting limit.

R – % RPD outside of range.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|------------------|-----------------------------------|------------------------|
| 8260B | MKTF-31 | Select VOCs | 2 |
| 200.8 | Multiple Samples | Select Total and Dissolved Metals | 5 |
| 8270C | MKTF-31 | 1,4-Dioxane | 10 |
| 8260B | MKTF-31 | MTBE | 20 |
| 200.8 | MKTF-28 | Dissolved Selenium | 50 |

Dissolved selenium was not detected in sample MKTF-28 at a dilution of 50 times. The sample was analyzed for the remaining dissolved metals at no dilution and a dilution of 5. The laboratory did not specify the reason for reporting dissolved selenium from this dilution rather than analyses performed at lower dilutions with lower detection limits.

5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? No

Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.

The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.

The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.



VALIDATION CRITERIA CHECKLIST

6. Were samples received in good condition within method-specified requirements?

No

Comments: Samples were received on ice, in good condition, and with the cooler temperatures both within and outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 1.5°C , 2.1°C , and 5.0°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature outside the recommended range at 0.6°C as noted on the CoC.

The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.

7. Were samples extracted/digested and analyzed within method-specified or technical holding times?

Yes

Comments: The samples were extracted/digested and analyzed within method-specific holding times.

8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil.

Yes

Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested.

9. Did the laboratory provide any specific initial and/or continuing calibration results?

No

Comments: Initial and continuing calibration data were not included as part of this data set.

10. If initial and/or continuing calibration results were provided, were the results within acceptable limits?

N/A

Comments: Initial and continuing calibration data were not included as part of this data set.

11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method?

Yes

Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples.

12. Were target analytes reported as not detected in the laboratory blanks?

No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|--------------------|--------|---------------|
| 200.7 | Total Cadmium | 72026 | 0.016 mg/L |
| 200.7 | Dissolved Barium | B93514 | 0.0013 mg/L |
| 200.8 | Total Antimony | 72026 | 0.00052 mg/L |
| 200.8 | Dissolved Antimony | D93335 | 0.00050 mg/L |
| 8015D | TPH DRO | 72049 | 0.080 mg/L |

Detections of TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank results were assigned JB qualifiers.

Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.



VALIDATION CRITERIA CHECKLIST

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| <u>Method</u> | <u>Analytes</u> | <u>Batch</u> | <u>MS Sample Source</u> |
|---------------|-----------------------------|--------------|-------------------------|
| 200.7 | Total Metals | 72026 | EB-12-8-22, MKTF-40 |
| 200.7 | Dissolved Metals | B93514 | Not Prepared |
| 200.7 | Dissolved Metals | B93558 | Not Prepared |
| 200.8 | Total Metals | 72026 | Not Prepared |
| 200.8 | Dissolved Metals | A93438 | Not Prepared |
| 200.8 | Dissolved Metals | D93335 | EB-12-8-22 |
| 245.1 | Total and Dissolved Mercury | 72201 | DUP 12-8-22 |
| 504.1 | EDB | 72190 | Not Prepared |
| 4500CN E | Cyanide | WG1974296 | Not Associated |
| 8015D | TPH DRO and MRO | 72049 | Not Prepared |
| 8015D | TPH GRO | A93392 | MKTF-40 |
| 8260B | VOCs | R93394 | Not Prepared |
| 8270C SIM | SVOCs | 72036 | Not Prepared |
| 8270C | SVOCs | 72036 | Not Prepared |

Not Associated – The MS sample source was not associated with this project.

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? Yes

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits.

The percent recoveries and RPD values for MS/MSDs prepared from non-project samples were evaluated and considered but data were not qualified based on those results since matrix similarity to project samples could not be guaranteed.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits?

No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits | LCS/LCSD RPD | RPD QC Limits |
|-----------|---------------------|--------|--------------|---------------|--------------------|--------------|---------------|
| 200.7 | Total Barium | 72026 | 135% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Chromium | 72026 | 142% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Zinc | 72026 | 146% | ----- | 70-130% | ----- | ----- |
| 200.7 | Total Cadmium | 72026 | 484% | ----- | 70-130% | ----- | ----- |
| 200.7 | Dissolved Chromium | B93558 | 65.3% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Antimony | 72026 | 51.2% | ----- | 70-130% | ----- | ----- |
| 200.8 | Total Selenium | 72026 | 135% | ----- | 70-130% | ----- | ----- |
| 245.1 | Mercury | 72201 | 131% | ----- | 70-130% | ----- | ----- |
| 8015D | TPH DRO | 72049 | Acceptable | Acceptable | 31.2-125% | 22.7% | 20% |
| 8270C | Pyrene | 72036 | Acceptable | Acceptable | 61-123% | 17.9% | 11.8% |
| 8270C SIM | Naphthalene | 72036 | Acceptable | Acceptable | 15-78.3% | 33.3% | 31.7% |
| 8270C SIM | 1-Methylnaphthalene | 72036 | Acceptable | Acceptable | 15-79.6% | 40.0% | 31.4% |
| 8270C SIM | 2-Methylnaphthalene | 72036 | Acceptable | Acceptable | 15-78.6% | 39.1% | 30.5% |
| 8270C SIM | Acenaphthene | 72036 | Acceptable | Acceptable | 15-92% | 37.8% | 30.5% |
| 8270C SIM | Fluorene | 72036 | Acceptable | Acceptable | 15-96% | 31.4% | 25.1% |

Detections of the identified analytes with LCS recoveries above the QC limits were qualified as J+ in the associated samples due to evidence of potential high bias. Non-detection of these analytes in the associated samples did not require qualification.

Dissolved chromium and total antimony were not detected in the associated samples and the results were qualified as UJ due to evidence of potential low bias.

The results for analytes with LCS/LCSD RPD values that exceeded the QC limits were qualified as J for detections and UJ for non-detections for the associated samples due to evidence of poor precision.

17. Were surrogate recoveries within laboratory QC limits?

No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|-------------|--------------------|-----------|
| 8270C | 2-Fluorophenol | MKTF-29 | 1.92% | 15-84.5% |
| 8270C | Phenol-d ₅ | MKTF-29 | 9.84% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | MKTF-29 | 1.62% | 15-108% |
| 8270C | 2-Fluorophenol | DUP 12-8-22 | 9.97% | 15-84.5% |
| 8270C | 2,4,6-Tribromophenol | DUP 12-8-22 | 2.06% | 15-108% |

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

The analytes in the acid fraction of samples MKTF-29 and DUP 12-8-22 were not detected. Since the recoveries for at least 2 of 3 surrogates in samples MKTF-29 and DUP 12-8-22 were less than 10%, these results were qualified as R to indicate rejected (not usable) data based on evidence of extreme low bias.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries. | |
| 18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | Yes |
| Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One trip blank sample, Trip Blank, one field blank sample, FB-12-8-22, and one equipment blank sample, EB-12-8-22, were collected as part of this sample set. | |
| 19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? | No |
| Comments: Target analytes were not detected in the trip blank, field blank, and equipment blank samples with the following exception.

TPH DRO was detected in the Method 8015D analysis of equipment blank sample EB-12-8-22 at 0.045 mg/L. The TPH DRO results in Method 8015D batch 72049 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required. | |
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | Yes |
| Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.
Sample DUP 12-8-22 was collected as a field duplicate of sample MKTF-40. | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | No |
| Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.

RPD values for dissolved barium and total cyanide exceeded the data validation limit of 30% at 30.8% and 34.9%, respectively. The dissolved barium and total cyanide results for samples MKTF-40 and DUP-12-8-22 were assigned J qualifiers due to evidence of poor precision. | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? | N/A |
| Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1974296 from samples not associated with this data set.

The RPD values for the laboratory duplicate samples prepared from non-project samples were evaluated and considered, but data were not qualified based on these results since matrix similarity to project samples could not be guaranteed. | |



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? Yes

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| MKTF-40 | Arsenic | ND | 0.0010 |
| MKTF-28 | Arsenic | 0.0034 | 0.055 |
| MKTF-27 | Selenium | ND | 0.0031 |
| MKTF-29 | Selenium | ND | 0.0027 |
| DUP 12-8-22 | Selenium | ND | 0.0026 |
| MKTF-31 | Silver | ND | 0.0016 |
| MKTF-28 | Silver | ND | 0.0020 |
| MKTF-40 | Zinc | 0.0051 | 0.011 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: MKTF-40
Field Duplicate Sample ID: DUP-12-8-22 | | | | |
|--|----------------|--------------------|---------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 0.045 mg/L | 0.033 mg/L | 30.8% |
| Barium, Total | E 200.7 | 0.10 mg/L | 0.098 mg/L | 2.0% |
| Beryllium, Total | E 200.7 | 0.0010 mg/L | ND (0.0020 mg/L) | DL |
| Chromium, Total | E 200.7 | 0.0034 mg/L | ND (0.0060 mg/L) | DL |
| Nickel, Dissolved | E 200.7 | 0.0096 mg/L | 0.0078 mg/L | 20.7% +/-RL |
| Nickel, Total | E 200.7 | 0.011 mg/L | 0.012 mg/L | 8.7% +/-RL |
| Silver, Dissolved | E 200.7 | 0.0070 mg/L | 0.0031 mg/L | 77.2% +/-RL |
| Silver, Total | E 200.7 | 0.0082 mg/L | 0.0083 mg/L | 1.2% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0097 mg/L | 0.0075 mg/L | 25.6% +/-RL |
| Vanadium, Total | E 200.7 | 0.016 mg/L | 0.015 mg/L | 6.5% +/-RL |
| Zinc, Dissolved | E 200.7 | 0.011 mg/L | ND (0.010 mg/L) | DL |
| Zinc, Total | E 200.7 | 0.0051 mg/L | ND (0.010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0010 mg/L | 0.00069 mg/L | 36.7% +/-RL |
| Arsenic, Total | E200.8 | ND (0.0050 mg/L) | 0.0014 mg/L | DL |
| Lead, Total | E200.8 | 0.0019 mg/L | 0.0018 mg/L | 5.4% +/-RL |
| Selenium, Dissolved | E200.8 | ND (0.0050 mg/L) | 0.0026 mg/L | DL |
| Selenium, Total | E200.8 | 0.0052 mg/L | ND (0.0050 mg/L) | DL |
| Cyanide, Total | E335.4 | 0.0115 mg/L | 0.00808 mg/L | 34.9% |
| TPH DRO | SW8015D | 0.067 mg/L | 0.044 mg/L | 41.4% +/-RL |
| 1,1-Dichloroethane | SW8260B | 1.0 µg/L | 1.0 µg/L | 0.0% +/-RL |
| 1,4-Dioxane | SW8270C | 12 µg/L | 11 µg/L | 8.7% |
| <p>Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.</p> <p>DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).</p> <p>+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.</p> <p>RPD values for dissolved barium and total cyanide exceeded the data validation limit of 30% at 30.8% and 34.9%, respectively, which was evidence of poor precision. The dissolved barium and total cyanide results were qualified as J for samples MKTF-40 and DUP-12-8-22.</p> | | | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| ERPD-FD | High field duplicate RPD. |
| ERPD-LCS | The LCS/LCSD RPD exceeded the upper acceptable limit indicating poor precision. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-----------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,1-Dichloroethane | SW8260B | MKTF-29 | 2212630-006a | 0.76 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | MKTF-28 | 2212630-005c | 0.66 | 1.0 | µg/L | J | MDLRL |
| 1-Methylnaphthalene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-40 | 2212630-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-27 | 2212630-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-28 | 2212630-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-29 | 2212630-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 1-Methylnaphthalene | SW8270C | MKTF-31 | 2212630-003c | 0.16 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | MKTF-29 | 2212630-006c | ND | 10 | µg/L | R | LR-SUR |
| 2,4,6-Trichlorophenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | MKTF-29 | 2212630-006c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | MKTF-29 | 2212630-006c | ND | 20 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 20 | µg/L | R | LR-SUR |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| 2-Methylnaphthalene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-40 | 2212630-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-27 | 2212630-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-28 | 2212630-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-29 | 2212630-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| 2-Methylnaphthalene | SW8270C | MKTF-31 | 2212630-003c | 0.22 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| 2-Methylphenol | SW8270C | MKTF-29 | 2212630-006c | ND | 10 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | MKTF-29 | 2212630-006c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 10 | µg/L | R | LR-SUR |
| Acenaphthene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-40 | 2212630-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-31 | 2212630-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-27 | 2212630-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-28 | 2212630-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | MKTF-29 | 2212630-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Acenaphthene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Antimony, Total | E200.8 | EB-12-8-22 | 2212630-001D | ND | 0.001 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | MKTF-40 | 2212630-002D | ND | 0.005 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | MKTF-31 | 2212630-003D | ND | 0.001 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | MKTF-27 | 2212630-004D | ND | 0.005 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | MKTF-28 | 2212630-005D | ND | 0.001 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | MKTF-29 | 2212630-006D | ND | 0.001 | mg/L | UJ | LR-LCS |
| Antimony, Total | E200.8 | DUP 12-8-22 | 2212630-007D | ND | 0.005 | mg/L | UJ | LR-LCS |
| Arsenic, Dissolved | E200.8 | MKTF-40 | 2212630-002E | 0.0010 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | MKTF-31 | 2212630-003E | 0.00068 | 0.0010 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Arsenic, Dissolved | E200.8 | DUP 12-8-22 | 2212630-007E | 0.00069 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | MKTF-29 | 2212630-006D | 0.0013 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | DUP 12-8-22 | 2212630-007D | 0.0014 | 0.0050 | mg/L | J | MDLRL |
| Barium, Dissolved | E 200.7 | MKTF-40 | 2212630-002E | 0.045 | 0.0020 | mg/L | J | ERPD-FD |
| Barium, Dissolved | E 200.7 | DUP 12-8-22 | 2212630-007E | 0.033 | 0.0020 | mg/L | J | ERPD-FD |
| Barium, Total | E 200.7 | MKTF-40 | 2212630-002D | 0.10 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-31 | 2212630-003D | 0.73 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-27 | 2212630-004D | 0.087 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.19 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | MKTF-29 | 2212630-006D | 0.31 | 0.0030 | mg/L | J+ | HR-LCS |
| Barium, Total | E 200.7 | DUP 12-8-22 | 2212630-007D | 0.098 | 0.0030 | mg/L | J+ | HR-LCS |
| Benzene | SW8260B | MKTF-29 | 2212630-006a | 0.59 | 1.0 | µg/L | J | MDLRL |
| Benzoic Acid | SW8270C | MKTF-29 | 2212630-006c | ND | 20 | µg/L | R | LR-SUR |
| Benzoic Acid | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 20 | µg/L | R | LR-SUR |
| Beryllium, Total | E 200.7 | MKTF-40 | 2212630-002D | 0.0010 | 0.0020 | mg/L | J | MDLRL |
| Beryllium, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.00089 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | MKTF-29 | 2212630-006E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | DUP 12-8-22 | 2212630-007E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Total | E 200.7 | MKTF-31 | 2212630-003D | 0.030 | 0.0060 | mg/L | J+ | HR-LCS |
| Chromium, Total | E 200.7 | MKTF-40 | 2212630-002D | 0.0034 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Chromium, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.0028 | 0.0060 | mg/L | J+ | HR-LCS, MDLRL |
| Cobalt, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.0038 | 0.0060 | mg/L | J | MDLRL |
| Cyanide, Total | E335.4 | MKTF-40 | 2212630-002F | 0.0115 | 0.0050 | mg/L | J | ERPD-FD |
| Cyanide, Total | E335.4 | DUP 12-8-22 | 2212630-007F | 0.00808 | 0.0050 | mg/L | J | ERPD-FD |
| Fluorene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-40 | 2212630-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-31 | 2212630-003c | ND | 0.30 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|--------------|---------|-------|--------------------|-----------------|
| Fluorene | SW8270C | MKTF-27 | 2212630-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-28 | 2212630-005c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | MKTF-29 | 2212630-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Fluorene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Lead, Dissolved | E200.8 | MKTF-31 | 2212630-003E | 0.00009
3 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-28 | 2212630-005E | 0.00018 | 0.00050 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | MKTF-29 | 2212630-006E | 0.00007
3 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-40 | 2212630-002D | 0.0019 | 0.00250 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-27 | 2212630-004D | 0.0011 | 0.00250 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | MKTF-29 | 2212630-006D | 0.00046 | 0.00050 | mg/L | J | MDLRL |
| Lead, Total | E200.8 | DUP 12-8-22 | 2212630-007D | 0.0018 | 0.0025 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | MKTF-31 | 2212630-003c | 0.52 | 0.30 | µg/L | J | ERPD-LCS |
| Naphthalene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-40 | 2212630-002c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-27 | 2212630-004c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-29 | 2212630-006c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 0.30 | µg/L | UJ | ERPD-LCS |
| Naphthalene | SW8270C | MKTF-28 | 2212630-005c | 0.24 | 0.30 | µg/L | J | ERPD-LCS, MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-40 | 2212630-002E | 0.0096 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-31 | 2212630-003E | 0.0046 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | MKTF-28 | 2212630-005E | 0.0062 | 0.010 | mg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | DUP 12-8-22 | 2212630-007E | 0.0078 | 0.010 | mg/L | J | MDLRL |
| Nickel, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.0089 | 0.010 | mg/L | J | MDLRL |
| Phenol | SW8270C | MKTF-29 | 2212630-006c | ND | 20 | µg/L | R | LR-SUR |
| Phenol | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 20 | µg/L | R | LR-SUR |
| Pyrene | SW8270C | EB-12-8-22 | 2212630-001c | ND | 1.0 | µg/L | UJ | ERPD-LCS |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|--------|-------|--------------------|----------------------|
| Pyrene | SW8270C | MKTF-40 | 2212630-002c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-31 | 2212630-003c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-27 | 2212630-004c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-28 | 2212630-005c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | MKTF-29 | 2212630-006c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Pyrene | SW8270C | DUP 12-8-22 | 2212630-007c | ND | 1.0 | µg/L | UJ | ERPD-LCS |
| Selenium, Dissolved | E200.8 | MKTF-27 | 2212630-004E | 0.0031 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | MKTF-29 | 2212630-006E | 0.0027 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Dissolved | E200.8 | DUP 12-8-22 | 2212630-007E | 0.0026 | 0.0050 | mg/L | J | MDLRL |
| Selenium, Total | E200.8 | MKTF-40 | 2212630-002D | 0.0052 | 0.0050 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | MKTF-31 | 2212630-003D | 0.0067 | 0.0010 | mg/L | J+ | HR-LCS |
| Selenium, Total | E200.8 | MKTF-28 | 2212630-005D | 0.0063 | 0.0010 | mg/L | J+ | HR-LCS |
| Silver, Dissolved | E 200.7 | MKTF-31 | 2212630-003E | 0.0016 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-27 | 2212630-004E | 0.0031 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-28 | 2212630-005E | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | MKTF-29 | 2212630-006E | 0.0044 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | DUP 12-8-22 | 2212630-007E | 0.0031 | 0.0050 | mg/L | J | MDLRL |
| TPH DRO | SW8015 | MKTF-31 | 2212630-003C | 0.23 | 0.064 | mg/L | JB | ERPD-LCS, MBD |
| TPH DRO | SW8015 | MKTF-27 | 2212630-004C | 0.17 | 0.064 | mg/L | JB | ERPD-LCS, MBD |
| TPH DRO | SW8015 | MKTF-28 | 2212630-005C | 0.20 | 0.064 | mg/L | JB | ERPD-LCS, MBD |
| TPH DRO | SW8015 | MKTF-29 | 2212630-006C | 0.31 | 0.064 | mg/L | JB | ERPD-LCS, MBD |
| TPH DRO | SW8015 | EB-12-8-22 | 2212630-001C | 0.045 | 0.064 | mg/L | U | ERPD-LCS, MBD |
| TPH DRO | SW8015 | MKTF-40 | 2212630-002C | 0.067 | 0.064 | mg/L | U | ERPD-LCS, MBD |
| TPH DRO | SW8015 | DUP 12-8-22 | 2212630-007C | 0.044 | 0.064 | mg/L | U | ERPD-LCS, MBD, MDLRL |
| TPH GRO | SW8015 | MKTF-27 | 2212630-004a | 0.034 | 0.050 | mg/L | J | MDLRL |
| TPH GRO | SW8015 | MKTF-29 | 2212630-006a | 0.023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-40 | 2212630-002E | 0.0097 | 0.050 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| Vanadium, Dissolved | E 200.7 | MKTF-31 | 2212630-003E | 0.0039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-27 | 2212630-004E | 0.0039 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-28 | 2212630-005E | 0.0055 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | MKTF-29 | 2212630-006E | 0.0056 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP 12-8-22 | 2212630-007E | 0.0075 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-40 | 2212630-002D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-27 | 2212630-004D | 0.0063 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.016 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | MKTF-29 | 2212630-006D | 0.0078 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP 12-8-22 | 2212630-007D | 0.015 | 0.050 | mg/L | J | MDLRL |
| Zinc, Dissolved | E 200.7 | MKTF-31 | 2212630-003E | 0.0048 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | MKTF-31 | 2212630-003D | 0.047 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Total | E 200.7 | MKTF-28 | 2212630-005D | 0.020 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Total | E 200.7 | MKTF-29 | 2212630-006D | 0.010 | 0.010 | mg/L | J+ | HR-LCS |
| Zinc, Total | E 200.7 | MKTF-40 | 2212630-002D | 0.0051 | 0.010 | mg/L | J+ | HR-LCS, MDLRL |





Tier II Data Validation Report Summary

| | |
|---|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-080-002 Task: 0006 | Sample Start Date: 12/14/2022 |
| Date Validated: 01/31/2023 | Sample End Date: 12/14/2022 |
| Parameters Included: <ul style="list-style-type: none"> ▪ Volatile Organic Compounds (VOC) by Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) Method 8260B ▪ 1,2-Dibromoethane (EDB) by EPA Method 504.1 ▪ Semivolatile Organic Compounds (SVOC) by SW-846 Method 8270C and Method 8270C with Selected Ion Monitoring (SIM) ▪ Total Petroleum Hydrocarbons (TPH) Gasoline Range Organics (GRO) by SW-846 Method 8015D ▪ TPH Diesel Range Organics (DRO) and Motor Oil Range Organics (MRO) by SW-846 Method 8015D Modified ▪ Total and Dissolved Metals by EPA Method 200.7 and Method 200.8 ▪ Total and Dissolved Mercury by EPA Method 245.1 ▪ Cyanide by Standard Methods for the Examination of Water and Wastewater (SM) Method 4500 CN E | |
| Laboratory Project ID: 2212913 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, with additional data from Pace Analytical National of Mount Juliet, Tennessee evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Precision, accuracy, method compliance, and completeness of this data package were assessed during this data review. Precision was determined by evaluating the calculated relative percent difference (RPD) values from:

- Field duplicate pairs
- Laboratory duplicate pairs
- Matrix spike (MS) and matrix spike duplicate (MSD) pairs
- Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) pairs

Laboratory accuracy was established by reviewing the demonstrated percent recoveries (%R) of the following items to verify that data are not biased.

- MS/MSD samples
- LCS/LCSD samples
- Organic system monitoring compounds (surrogates)





Tier II Data Validation Report Summary

Field accuracy was established by collecting and analyzing the following samples to monitor for possible ambient or cross contamination during sampling and transportation.

- Field blanks
- Equipment blanks

Method compliance was established by reviewing sample integrity, holding times, detection limits, surrogate recoveries, laboratory blanks, initial and continuing calibrations (where applicable), and the LCS/LCSD percent recoveries against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| EB-12-14-22 | 2212913-001 |
| OW-58 | 2212913-002 |
| OW-70 | 2212913-003 |
| NAPI-2 | 2212913-004 |
| NAPI-3 | 2212913-005 |
| KA-3 | 2212913-006 |
| FB-12-14-22 | 2212913-007 |
| DUP-12-14-22 | 2212913-008 |



Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ✓ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- ⊗ Laboratory Blanks (Items 11 and 12)
- ✓ MS/MSD (Items 13 and 14)
- ⊗ LCS/LCSD (Items 15 and 16)
- ⊗ System Monitoring Compounds (i.e., Surrogates) (Item 17)
- ⊗ Field and Equipment Blanks (Items 18 and 19)
- ⊗ Field Duplicates (Items 20 and 21)
- ✓ Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Data for inorganic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Inorganic Superfund Methods Data Review, document number EPA-540-R-20-006, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Inorganic Data Review, document number EPA 540-R-04-004, October 2004.
- Review of field duplicates was conducted according to the USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|--|
| J | Estimated concentration |
| J+ | The result is an estimated concentration, but may be biased high |
| J- | The result is an estimated concentration, but may be biased low |
| UJ | Estimated reporting limit |
| U | Evaluated to be undetected at the reporting limit |
| JB | Estimated concentration due to blank contamination |
| R | Rejected, data not usable |

Data Completeness

The analyses were performed as requested on the CoC records. The associated samples were received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 540 data points. The data completeness calculation does not include any submitted blank sample results. Seven data points were rejected. The data completeness measure for this data package is calculated to be 98.70% and is acceptable.



VALIDATION CRITERIA CHECKLIST

1. Was the report free of non-conformances identified by the laboratory? No

Comments: The laboratory noted the following analytical non-conformances related to this data set.

Method 80156D DRO/MRO: The method blank had a low-level detection for DRO. Samples with detections are flagged with a "B".

Methods 8270C and 8270C SIM: 1-Methylnaphthalene, 2-methylnaphthalene, and naphthalene were reported by EPA Method 8270 instead of EPA Method 8270 SIM because of their elevated concentrations for samples OW-58 and DUP-12-14-22.

1-Methylnaphthalene was reported by EPA Method 8270 instead of EPA Method 8270 SIM because of its elevated concentration for sample NAPI-2.

2. Were the data free of data qualification flags and/or notes used by the laboratory? No
If no, define.

Comments: The laboratory used the following data qualification flags with this data set.

B – Analyte detected in the associated method blank.

D – Sample diluted due to matrix.

J – Analyte detected below quantitation limits.

J6 – The sample matrix interfered with the ability to make any accurate determination; spike value is low.

S – % Recovery outside of range due to dilution or matrix interference.

* – Value exceeds maximum contaminant level.

3. Were sample CoC forms and custody procedures complete? Yes

Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the samples were transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times.

4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? Yes

Comments: The detection limits appeared to be acceptable. The following dilutions were applied.

| <u>Method</u> | <u>Sample(s)</u> | <u>Analyte(s)</u> | <u>Dilution Factor</u> |
|---------------|---------------------|-------------------------------|------------------------|
| 8260B | NAPI-2 | Select VOCs | 2 |
| 200.7 | Multiple Samples | Total and/or Dissolved Barium | 5 |
| 200.8 | Multiple Samples | Dissolved Metals | 5 |
| 8015D | OW-58, DUP-12-14-22 | TPH DRO and MRO | 5 |
| 200.7 | OW-58, DUP-12-14-22 | Total and/or Dissolved Barium | 10 |
| 8015D | NAPI-2 | TPH GRO | 10 |
| 8260B | NAPI-2 | Benzene, Ethylbenzene | 20 |
| 8015D | OW-58, DUP-12-14-22 | TPH GRO | 50 |
| 8260B | OW-58, DUP-12-14-22 | Select VOCs | 50 |
| 8260B | OW-58, DUP-12-14-22 | Benzene | 500 |



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | No |
| <p>Comments: The reported analytical methods were in compliance with the CoC, and the laboratory reported the requested constituents in accordance with the CoC, with the following exceptions.</p> <p>The CoC requested total and dissolved metals using only Method 200.7; however, the laboratory analyzed the samples using both Method 200.7 and Method 200.8. This substituted analytical method, Method 200.8, met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> <p>The CoC requested cyanide using Method 335.4; however, the laboratory analyzed the samples using Method 4500 CN E. This substituted analytical method met similar sensitivity, accuracy, and precision goals and, therefore, was an acceptable replacement.</p> | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| <p>Comments: Samples were received on ice, in good condition, and with the cooler temperatures outside the recommended temperature range of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ between -3.5°C and 0.7°C as noted on the CoC and Sample Log-in Check List. Samples transferred to Pace National were received in good condition with the cooler temperature within the recommended range at 4.6°C as noted on the CoC.</p> <p>The cooler temperatures below 2.0°C were judged as acceptable since the laboratory did not report the sample containers as broken or frozen.</p> | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | Yes |
| Comments: The samples were extracted/digested and analyzed within method-specific holding times. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The results were reported in concentration units of micrograms per liter ($\mu\text{g/L}$) and milligrams per liter (mg/L), which were acceptable for the sample matrix and the analyses requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | Yes |
| Comments: The total number of laboratory blank samples prepared was equal to at least 5% of the total number of samples. | |



VALIDATION CRITERIA CHECKLIST

12. Were target analytes reported as not detected in the laboratory blanks? No

Comments: Target analytes were reported as not detected in the laboratory blanks, with the following exceptions.

| Method | Analyte | Batch | Concentration |
|--------|--------------------|--------|---------------|
| 200.7 | Dissolved Antimony | D93335 | 0.00050 mg/L |
| 8015D | TPH DRO | 72199 | 0.097 mg/L |

Detections of dissolved antimony and TPH DRO in the associated samples that were less than the blank results and/or less than the applicable reporting limits were assigned U qualifiers. Detections of TPH DRO in the associated samples that were greater than the reporting limits but less than or equal to 10 times the blank result were assigned JB qualifiers. Non-detections of the identified analytes in the associated samples and detections that were above the reporting limit and greater than ten times the blank concentration did not require qualification.

13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of matrix spike samples prepared was equal to at least 5% of the total number of samples, although MS samples were not prepared/reported for all analyses and/or batches. The matrix spike sample source for each analytical batch in this sample set has been indicated below.

| Method | Analytes | Batch | MS Sample Source |
|-----------|-----------------------------|-----------|------------------|
| 200.7 | Total Metals | 72141 | Not Prepared |
| 200.7 | Dissolved Metals | C93558 | Not Prepared |
| 200.8 | Total Metals | 72141 | Not Prepared |
| 200.8 | Dissolved Metals | D93335 | EB-12-14-22 |
| 245.1 | Total and Dissolved Mercury | 72202 | DUP-12-14-22 |
| 504.1 | EDB | 72230 | Not Prepared |
| 4500CN E | Cyanide | WG1976252 | OW-58 |
| 8015D | TPH DRO and MRO | 72199 | Not Prepared |
| 8015D | TPH GRO | R93515 | Not Prepared |
| 8260B | VOCs | R93479 | Not Prepared |
| 8260B | Benzene | R93506 | Not Prepared |
| 8270C SIM | SVOCs | 72138 | Not Prepared |
| 8270C | SVOCs | 72138 | Not Prepared |

Not Prepared – Matrix spikes were not prepared/reported for this batch.

14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? No

Comments: The percent recoveries and RPDs for MS/MSDs prepared from project samples were within data validation and laboratory QC limits, with the following exception.

The MS recovery for cyanide in Method 4500CN E batch WG1976252 was outside the laboratory QC limits of 90.0-110% at 89.9%. However, the recovery was within data validation limits of 75-125%. Validation action was not required.

15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? Yes

Comments: The total number of LCS samples analyzed was equal to at least 5% of the total number of samples.



VALIDATION CRITERIA CHECKLIST

16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? No

Comments: The LCS and LCSD percent recoveries and LCS/LCSD RPDs were within data validation and laboratory QC limits, with the following exceptions.

| Method | Analyte | Batch | LCS Recovery | LCSD Recovery | LCS/LCSD QC Limits |
|--------|--------------------|--------|--------------|---------------|--------------------|
| 200.7 | Total Zinc | 72141 | 69.7% | ----- | 70-130% |
| 200.7 | Dissolved Nickel | C93558 | 137% | ----- | 70-130% |
| 200.7 | Dissolved Chromium | C93558 | 50.7% | ----- | 70-130% |

Total zinc and dissolved chromium results in the associated samples were assigned J- qualifiers if detected and UJ if not detected due to evidence of potential low bias.

Detections of dissolved nickel in the associated samples were qualified as J+ due to evidence of potential high bias. Non-detections of dissolved nickel in the associated samples did not require qualification.

17. Were surrogate recoveries within laboratory QC limits? No

Comments: Surrogate recoveries were within laboratory QC limits, with the following exceptions.

| Method | Surrogate | Sample | Surrogate Recovery | QC Limits |
|--------|-----------------------|--------|--------------------|-----------|
| 8270C | 2-Fluorophenol | OW-58 | 0% | 15-84.5% |
| 8270C | Phenol-d ₅ | OW-58 | 0% | 15-67% |
| 8270C | 2,4,6-Tribromophenol | OW-58 | 1.94% | 15-108% |
| 8015D | BFB | OW-70 | 235% | 70-130% |
| 8015D | BFB | NAPI-3 | 147% | 70-130% |

TPH GRO was detected in the Method 8015D analyses for samples OW-70 and NAPI-3, and these results were assigned J+ qualifiers to indicate a potential high bias.

Since Method 8270C surrogate associations were not available from the laboratory, qualification was assigned to all of the target analytes in a given fraction (acid or base/neutral) when two or more surrogates from the same fraction (acid or base/neutral) were outside the acceptance range.

The analytes in the acid fraction of sample OW-58 were not detected. Since the recoveries of the surrogates in sample OW-58 were less than 10%, the results for the associated acid fraction analytes were assigned R qualifiers to indicate rejected (not usable) data based on evidence of extreme low bias.

Qualification of sample data was not required based on surrogate non-conformances in QC samples as the environmental samples were evaluated based on their specific surrogate recoveries.

18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? Yes

Comments: The number of trip, field, and equipment blanks collected was equal to at least 10% of the number of samples. One field blank sample, FB-12-14-22, and one equipment blank sample, EB-12-14-22, were collected as part of this sample set.



| VALIDATION CRITERIA CHECKLIST | |
|--|-----|
| 19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? | No |
| <p>Comments: Target analytes were not detected in the field blank and equipment blank samples, with the following exceptions.</p> <p>Total beryllium was detected in the Method 200.7 analysis of equipment blank sample EB-12-14-22 at a concentration of 0.0008 mg/L. Total beryllium was detected in samples NAPI-2 and OW-70 at concentrations less than the blank level and/or the laboratory reporting limits, and the results were assigned U qualifiers. Non-detections of this analyte in the associated samples did not require qualification.</p> <p>TPH DRO was detected in the Method 8015D analysis of equipment blank sample EB-12-14-22 at 0.025 mg/L. The TPH DRO results in Method 8015D batch 72199 were previously qualified due to a laboratory blank detection; therefore, additional qualification due to the equipment blank contamination was not required.</p> | |
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | Yes |
| <p>Comments: The number of field duplicates collected was equal to at least 10% of the number of samples.</p> <p>Sample DUP-12-14-22 was collected as a field duplicate of sample OW-58.</p> | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | No |
| <p>Comments: As indicated in the Field Duplicate Summary Table at the end of this report, field duplicate RPD values were within data validation QC limits of 0-30% for water samples, with the following exceptions.</p> <p>The RPD values for toluene, total xylenes, and naphthalene exceeded the data validation limit of 30% at 38.3%, 44.1%, and 31.0%, respectively. The toluene, total xylenes, and naphthalene results for samples OW-58 and DUP-12-14-22 were assigned J qualifiers due to evidence of poor precision</p> <p>An RPD value could not be calculated for phenol for the field duplicate pair OW-58 and DUP-12-14-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, phenol was qualified as J and UJ for the duplicate and parent samples, respectively.</p> | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? | Yes |
| <p>Comments: Laboratory duplicates were prepared for the analysis of cyanide in batch WG1976252 from a sample not associated with this data set and sample NAPI-2.</p> <p>The RPD for the laboratory duplicate prepared from a project sample was within laboratory acceptance limits.</p> <p>The RPD value for the laboratory duplicate sample prepared from a non-project sample was evaluated and considered, but data were not qualified based on this result since matrix similarity to project samples could not be guaranteed.</p> | |



VALIDATION CRITERIA CHECKLIST

23. Were the following data relationships realistic?

- Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? N/A

Comments: Target analytes were not reported by more than one method.

- Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? No

Comments: The following table contains the exceptions in which the dissolved metals results exceeded the total metals results.

| <u>Sample ID</u> | <u>Analyte</u> | <u>Total Result (mg/L)</u> | <u>Dissolved Result (mg/L)</u> |
|------------------|----------------|----------------------------|--------------------------------|
| OW-58 | Antimony | 0.00053 | 0.0027 |
| KA-3 | Arsenic | 0.00062 | 0.00064 |
| DUP-12-14-22 | Arsenic | 0.0028 | 0.0032 |
| OW-58 | Lead | ND | 0.00034 |
| KA-3 | Zinc | 0.0046 | 0.0098 |

The EPA has not provided guidance or requirements for the evaluation, validation, and qualification of dissolved metals results that exceed the corresponding total metals results. Therefore, qualification of results was not performed based on these data.



FIELD DUPLICATE SUMMARY

| Client Sample ID: OW-58
Field Duplicate Sample ID: DUP-12-14-22 | | | | |
|--|----------------|---------------------|------------------|-----------------------------------|
| Analyte | Method | Laboratory Result | Duplicate Result | Relative Percent Difference (RPD) |
| Barium, Dissolved | E 200.7 | 4.7 mg/L | 4.8 mg/L | 2.1% |
| Barium, Total | E 200.7 | 4.9 mg/L | 5.3 mg/L | 7.8% |
| Nickel, Dissolved | E 200.7 | 0.045 mg/L | 0.045 mg/L | 0.0% |
| Nickel, Total | E 200.7 | 0.048 mg/L | 0.048 mg/L | 0.0% |
| Silver, Dissolved | E 200.7 | 0.0017 mg/L | ND (0.0050 mg/L) | DL |
| Silver, Total | E 200.7 | 0.0020 mg/L | 0.0020 mg/L | 0.0% +/-RL |
| Vanadium, Dissolved | E 200.7 | 0.0032 mg/L | 0.0033 mg/L | 3.1% +/-RL |
| Vanadium, Total | E 200.7 | 0.0048 mg/L | 0.0050 mg/L | 4.1% +/-RL |
| Antimony, Dissolved | E200.8 | 0.0027 mg/L | ND (0.0050 mg/L) | DL |
| Antimony, Total | E200.8 | 0.00053 mg/L | ND (0.0010 mg/L) | DL |
| Arsenic, Dissolved | E200.8 | 0.0025 mg/L | 0.0032 mg/L | 24.6% +/-RL |
| Arsenic, Total | E200.8 | 0.0027 mg/L | 0.0028 mg/L | 3.6% |
| Lead, Dissolved | E200.8 | 0.00034 mg/L | ND (0.0025 mg/L) | DL |
| TPH DRO | SW8015 | 5.8 mg/L | 7.7 mg/L | 28.1% |
| TPH GRO | SW8015 | 70 mg/L | 68 mg/L | 2.9% |
| 1,2,4-Trimethylbenzene | SW8260B | ND (50 µg/L) | 47 µg/L | DL |
| 1,3,5-Trimethylbenzene | SW8260B | ND (50 µg/L) | 23 µg/L | DL |
| Benzene | SW8260B | 31,000 µg/L | 30,000 µg/L | 3.3% |
| Ethylbenzene | SW8260B | 1,400 µg/L | 1,400 µg/L | 0.0% |
| Isopropylbenzene | SW8260B | 33 µg/L | 34 µg/L | 3.0% +/-RL |
| MTBE | SW8260B | 1,200 µg/L | 1,100 µg/L | 8.7% |
| n-Propylbenzene | SW8260B | 110 µg/L | 110 µg/L | 0.0% |
| Toluene | SW8260B | 190 µg/L | 280 µg/L | 38.3% |
| Xylenes, Total | SW8260B | 230 µg/L | 360 µg/L | 44.1% |
| 1,4-Dioxane | SW8270C | 0.84 µg/L | 0.94 µg/L | 11.2% +/-RL |
| 1-Methylnaphthalene | SW8270C | 38 µg/L | 49 µg/L | 25.3% |
| 2-Methylnaphthalene | SW8270C | 42 µg/L | 55 µg/L | 26.8% |
| Acenaphthene | SW8270C | 1.8 µg/L | 2.0 µg/L | 10.5% |
| Anthracene | SW8270C | 0.36 µg/L | 0.32 µg/L | 11.8% +/-RL |
| Fluoranthene | SW8270C | 0.22 µg/L | 0.18 µg/L | 20.0% +/-RL |
| Fluorene | SW8270C | 3.0 µg/L | 2.9 µg/L | 3.4% |
| Naphthalene | SW8270C | 71 µg/L | 97 µg/L | 31.0% |
| Phenanthrene | SW8270C | 3.5 µg/L | 2.9 µg/L | 18.8% |
| Phenol | SW8270C | ND (20 µg/L) | 50 µg/L | DL |



Field duplicate RPD control limits are not to exceed 30% for water as established by USEPA Region I - New England Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures, EQADR-Supplement2, September 2020.

DL – Indicates that the analyte was detected in one of the duplicate samples and was undetected in the other sample, and therefore an RPD could not be calculated. Data were not qualified since the detection was within two times the reporting limit. Non-detected results are indicated above with the applicable reporting limit as ND (RL).

+/-RL – Indicates that the detections in both of the samples were within two times the reporting limit. Qualification of data was not required.

The RPD values for toluene, total xylenes, and naphthalene exceeded the data validation limit of 30% at 38.3%, 44.1%, and 31.0%, respectively, which was evidence of poor precision. The toluene, total xylenes, and naphthalene results were qualified as J for samples OW-58 and DUP-12-14-22.

An RPD value could not be calculated for phenol for the field duplicate pair OW-58 and DUP-12-14-22 since the analyte was detected in the duplicate sample and was undetected in the parent sample. As the detection in the duplicate sample was greater than two times the reporting limit, phenol was qualified as J and UJ for the duplicate and parent samples, respectively.



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| EBD | Equipment blank detection |
| ERPD-FD | High field duplicate RPD. |
| HR-LCS | The LCS and/or LCSD percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| HR-SUR | The surrogate percent recovery was greater than the upper acceptable limit indicating a possible high bias. |
| LR-LCS | The LCS and/or LCSD percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| LR-SUR | The surrogate percent recovery was less than the lower acceptable limit indicating a possible low bias. |
| MBD | Method blank detection |
| MDLRL | Flagged by the laboratory: The result was greater than the MDL but less than the RL. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| 1,2,4-Trimethylbenzene | SW8260B | NAPI-2 | 2212913-004a | 1.4 | 2.0 | µg/L | J | MDLRL |
| 1,2,4-Trimethylbenzene | SW8260B | DUP-12-14-22 | 2212913-008a | 47 | 50 | µg/L | J | MDLRL |
| 1,3,5-Trimethylbenzene | SW8260B | DUP-12-14-22 | 2212913-008a | 23 | 50 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-58 | 2212913-002C | 0.84 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | OW-70 | 2212913-003c | 0.36 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | NAPI-3 | 2212913-005c | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | KA-3 | 2212913-006c | 0.42 | 1.0 | µg/L | J | MDLRL |
| 1,4-Dioxane | SW8270C | DUP-12-14-22 | 2212913-008C | 0.94 | 1.0 | µg/L | J | MDLRL |
| 2,4,6-Trichlorophenol | SW8270C | OW-58 | 2212913-002c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dimethylphenol | SW8270C | OW-58 | 2212913-002c | ND | 10 | µg/L | R | LR-SUR |
| 2,4-Dinitrophenol | SW8270C | OW-58 | 2212913-002c | ND | 20 | µg/L | R | LR-SUR |
| 2-Methylphenol | SW8270C | OW-58 | 2212913-002c | ND | 10 | µg/L | R | LR-SUR |
| 3,4-Methylphenol | SW8270C | OW-58 | 2212913-002c | ND | 10 | µg/L | R | LR-SUR |
| Anthracene | SW8270C | NAPI-2 | 2212913-004C | 0.20 | 0.30 | µg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Antimony, Dissolved | E200.8 | OW-58 | 2212913-002E | 0.0027 | 0.0050 | mg/L | U | MBD, MDLRL |
| Antimony, Total | E200.8 | OW-58 | 2212913-002D | 0.00053 | 0.0010 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-58 | 2212913-002E | 0.0025 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | OW-70 | 2212913-003E | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | NAPI-2 | 2212913-004E | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | NAPI-3 | 2212913-005E | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | KA-3 | 2212913-006E | 0.00064 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Dissolved | E200.8 | DUP-12-14-22 | 2212913-008E | 0.0032 | 0.0050 | mg/L | J | MDLRL |
| Arsenic, Total | E200.8 | KA-3 | 2212913-006D | 0.00062 | 0.0010 | mg/L | J | MDLRL |
| Benzoic Acid | SW8270C | OW-58 | 2212913-002c | ND | 20 | µg/L | R | LR-SUR |
| Beryllium, Total | E 200.7 | OW-70 | 2212913-003D | 0.0013 | 0.0020 | mg/L | U | EBD, MDLRL |
| Beryllium, Total | E 200.7 | NAPI-2 | 2212913-004D | 0.0006 | 0.0020 | mg/L | U | EBD, MDLRL |
| Beryllium, Total | E 200.7 | EB-12-14-22 | 2212913-001D | 0.0008 | 0.0020 | mg/L | J | MDLRL |
| Chromium, Dissolved | E 200.7 | EB-12-14-22 | 2212913-001E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | OW-58 | 2212913-002E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | OW-70 | 2212913-003E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | NAPI-2 | 2212913-004E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | NAPI-3 | 2212913-005E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | KA-3 | 2212913-006E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Chromium, Dissolved | E 200.7 | DUP-12-14-22 | 2212913-008E | ND | 0.0060 | mg/L | UJ | LR-LCS |
| Cobalt, Dissolved | E 200.7 | OW-70 | 2212913-003E | 0.0056 | 0.0060 | mg/L | J | MDLRL |
| Fluoranthene | SW8270C | OW-58 | 2212913-002C | 0.22 | 0.30 | µg/L | J | MDLRL |
| Fluoranthene | SW8270C | DUP-12-14-22 | 2212913-008C | 0.18 | 0.30 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | OW-58 | 2212913-002a | 33 | 50 | µg/L | J | MDLRL |
| Isopropylbenzene | SW8260B | DUP-12-14-22 | 2212913-008a | 34 | 50 | µg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-58 | 2212913-002E | 0.00034 | 0.0025 | mg/L | J | MDLRL |
| Lead, Dissolved | E200.8 | OW-70 | 2212913-003E | 0.00031 | 0.0025 | mg/L | J | MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|-------------------|---------|-----------------|---------------|---------|--------|-------|--------------------|-----------------|
| Lead, Total | E200.8 | NAPI-3 | 2212913-005D | 0.00043 | 0.0005 | mg/L | J | MDLRL |
| Naphthalene | SW8270C | OW-58 | 2212913-002c | 71 | 5.0 | µg/L | J | ERPD-FD |
| Naphthalene | SW8270C | DUP-12-14-22 | 2212913-008c | 97 | 5.0 | µg/L | J | ERPD-FD |
| n-Butylbenzene | SW8260B | OW-70 | 2212913-003a | 0.45 | 3.0 | µg/L | J | MDLRL |
| n-Butylbenzene | SW8260B | NAPI-2 | 2212913-004a | 1.5 | 6.0 | µg/L | J | MDLRL |
| Nickel, Dissolved | E 200.7 | OW-58 | 2212913-002E | 0.045 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | OW-70 | 2212913-003E | 0.037 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | NAPI-2 | 2212913-004E | 0.094 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | NAPI-3 | 2212913-005E | 0.019 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | KA-3 | 2212913-006E | 0.019 | 0.010 | mg/L | J+ | HR-LCS |
| Nickel, Dissolved | E 200.7 | DUP-12-14-22 | 2212913-008E | 0.045 | 0.010 | mg/L | J+ | HR-LCS |
| n-Propylbenzene | SW8260B | NAPI-3 | 2212913-005a | 0.83 | 1.0 | µg/L | J | MDLRL |
| Phenol | SW8270C | DUP-12-14-22 | 2212913-008c | 50 | 20 | µg/L | J | ERPD-FD |
| Phenol | SW8270C | OW-58 | 2212913-002c | ND | 20 | µg/L | R | ERPD-FD, LR-SUR |
| sec-Butylbenzene | SW8260B | NAPI-3 | 2212913-005a | 0.93 | 1.0 | µg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | OW-58 | 2212913-002E | 0.0017 | 0.0050 | mg/L | J | MDLRL |
| Silver, Dissolved | E 200.7 | NAPI-3 | 2212913-005E | 0.0015 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | OW-58 | 2212913-002D | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | NAPI-3 | 2212913-005D | 0.0021 | 0.0050 | mg/L | J | MDLRL |
| Silver, Total | E 200.7 | DUP-12-14-22 | 2212913-008D | 0.0020 | 0.0050 | mg/L | J | MDLRL |
| Toluene | SW8260B | OW-58 | 2212913-002a | 190 | 50 | µg/L | J | ERPD-FD |
| Toluene | SW8260B | DUP-12-14-22 | 2212913-008a | 280 | 50 | µg/L | J | ERPD-FD |
| Toluene | SW8260B | NAPI-2 | 2212913-004a | 1.1 | 2.0 | µg/L | J | MDLRL |
| TPH DRO | SW8015 | OW-70 | 2212913-003C | 0.95 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | NAPI-3 | 2212913-005C | 0.79 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | KA-3 | 2212913-006C | 0.57 | 0.064 | mg/L | JB | MBD |
| TPH DRO | SW8015 | EB-12-14-22 | 2212913-001C | 0.025 | 0.064 | mg/L | U | MBD, MDLRL |



| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|---------------------|---------|-----------------|---------------|--------|-------|-------|--------------------|-----------------|
| TPH GRO | SW8015 | OW-70 | 2212913-003a | 0.20 | 0.050 | mg/L | J+ | HR-SUR |
| TPH GRO | SW8015 | NAPI-3 | 2212913-005a | 0.20 | 0.050 | mg/L | J+ | HR-SUR |
| TPH ORO | SW8015 | NAPI-3 | 2212913-005C | 0.070 | 0.080 | mg/L | J | MDLRL |
| TPH ORO | SW8015 | KA-3 | 2212913-006C | 0.078 | 0.080 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-58 | 2212913-002E | 0.0032 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | OW-70 | 2212913-003E | 0.0018 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | NAPI-2 | 2212913-004E | 0.0026 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | KA-3 | 2212913-006E | 0.017 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Dissolved | E 200.7 | DUP-12-14-22 | 2212913-008E | 0.0033 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-58 | 2212913-002D | 0.0048 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | OW-70 | 2212913-003D | 0.021 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPI-2 | 2212913-004D | 0.0076 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | NAPI-3 | 2212913-005D | 0.0038 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | KA-3 | 2212913-006D | 0.023 | 0.050 | mg/L | J | MDLRL |
| Vanadium, Total | E 200.7 | DUP-12-14-22 | 2212913-008D | 0.0050 | 0.050 | mg/L | J | MDLRL |
| Xylenes, Total | SW8260B | OW-58 | 2212913-002a | 230 | 75 | µg/L | J | ERPD-FD |
| Xylenes, Total | SW8260B | DUP-12-14-22 | 2212913-008a | 360 | 75 | µg/L | J | ERPD-FD |
| Zinc, Dissolved | E 200.7 | KA-3 | 2212913-006E | 0.0098 | 0.010 | mg/L | J | MDLRL |
| Zinc, Total | E 200.7 | OW-70 | 2212913-003D | 0.014 | 0.010 | mg/L | J- | LR-LCS |
| Zinc, Total | E 200.7 | EB-12-14-22 | 2212913-001D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Zinc, Total | E 200.7 | OW-58 | 2212913-002D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Zinc, Total | E 200.7 | NAPI-3 | 2212913-005D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Zinc, Total | E 200.7 | DUP-12-14-22 | 2212913-008D | ND | 0.010 | mg/L | UJ | LR-LCS |
| Zinc, Total | E 200.7 | NAPI-2 | 2212913-004D | 0.0073 | 0.010 | mg/L | J- | LR-LCS, MDLRL |
| Zinc, Total | E 200.7 | KA-3 | 2212913-006D | 0.0046 | 0.010 | mg/L | J- | LR-LCS, MDLRL |





Tier II Data Validation Report Summary

| | |
|--|--|
| Client: Marathon Oil | Laboratory: Hall Environmental Analysis Laboratory |
| Project Name: Western Refining Southwest, Quarterly GW | Sample Matrix: Groundwater |
| Project Number: 697-082-003 Task: 0002 | Sample Start Date: 01/12/2023 |
| Date Validated: 02/15/2023 | Sample End Date: 01/12/2023 |
| Parameters Included: <ul style="list-style-type: none">E. Coli by Standard Methods for the Examination of Water and Wastewater (SM) Method 9223B | |
| Laboratory Project ID: 2301520 | |
| Data Validator: Daran O'Hollearn, Lead Project Scientist | |
| Reviewer: Mike Phillips, Senior Chemist | |

DATA EVALUATION CRITERIA SUMMARY

A Tier II Data Validation was performed by Trihydro Corporation's Chemical Data Evaluation Services Group on the analytical data report packages generated by Hall Environmental Analysis Laboratory of Albuquerque, New Mexico, evaluating samples from the Marathon Oil site, located in Gallup, New Mexico.

Method compliance was established by reviewing sample integrity, holding times, detection limits, and initial and continuing calibrations (where applicable), against method-specific requirements.

Completeness was evaluated by determining the overall ratio of the number of samples and analyses planned versus the number of samples with valid analyses. Determination of completeness included a review of the chain-of-custody (CoC), laboratory analytical methods, and other laboratory and field documents associated with this analytical data set.

SAMPLE NUMBERS TABLE

| Client Sample ID | Laboratory Sample Number |
|------------------|--------------------------|
| STP-1 to EP-2 | 2301520-001 |

Due to limitations of the Project Direct database, the E. Coli result of >24196 most probable number (MPN) per 100 milliliters could not be reported in the database.





Tier II Data Validation Report Summary

The laboratory data were reviewed to evaluate compliance with the methods and the quality of the reported data. Assessment of CoC completeness is included in Item 3 of the Data Validation Checklist. A check mark (✓) indicates that the referenced validation criteria were deemed acceptable, whereas a crossed circle (⊗) indicates validation criteria for which the data have been qualified by the data validator. An empty circle (○) indicates that the specified criterion does not apply to the reviewed data. Details are noted in the tables below.

Validation Criteria

- ✓ Data Completeness
- ✓ CoC Documentation (Item 3)
- ⊗ Holding Times and Preservation (Items 6 and 7)
- Initial and Continuing Calibrations (Items 9 and 10)
- Laboratory Blanks (Items 11 and 12)
- Matrix Spikes (MS) and Matrix Spike Duplicates (MSD) (Items 13 and 14)
- Laboratory Control Spikes (LCS) and Laboratory Control Spike Duplicates (LCSD) (Items 15 and 16)
- System Monitoring Compounds (i.e., Surrogates) (Item 17)
- Field, Equipment, and Trip Blanks (Items 18 and 19)
- Field Duplicates (Items 20 and 21)
- Laboratory Duplicates (Item 22)

Guidance References

Chemical data validation was conducted in accordance with the United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) National Functional Guidelines for the analyses listed below, or by the appropriate method if not covered in the National Functional Guidelines.

- Data for organic analyses were evaluated according to validation criteria set forth in the USEPA CLP National Functional Guidelines for Organic Superfund Methods Data Review, document number EPA-540-R-20-005, November 2020 with additional reference to the USEPA CLP National Functional Guidelines for Organic Data Review, document number EPA 540/R-99/008, October 1999.
- Trihydro Data Validation Variance Documentation, April 2022.





Tier II Data Validation Report Summary

OVERALL DATA PACKAGE ASSESSMENT

Based on a data validation review, the data are acceptable as delivered. Data qualified by the laboratory are discussed in Item 2 of the Validation Criteria Checklist.

The purpose of validating data and assigning qualifiers is to assist in proper data interpretation. Data that are not qualified meet the site data quality objectives. If values are assigned qualifiers other than an R (rejected, data not usable), the data may be used for site evaluation; however, consideration should be given to the reasons for qualification when interpreting sample concentrations. Data points that are assigned an R qualifier should not be used for site evaluation purposes.

If applicable, text was identified in **bold font** in the Validation Criteria Checklist to indicate that further action and/or qualification of the data were required. Data may have been qualified with J data flags by the laboratory if the result was greater than or equal to the method detection limit (MDL) but less than the reporting limit (RL). These laboratory-applied J flags were preserved, if present, and included in the Data Qualification Summary table at the end of this report. If applicable, data validation qualifiers were added for the items noted with crossed circles in the Validation Criteria section above. Please see the Data Qualification Summary table at the end of this report for a complete list of samples and analytes qualified.

If data would be qualified with more than one flag, one qualifier was assigned based on the severity; however, all reasons for qualification were retained. Data that would be qualified with both J+ and J- flags were evaluated based on validation criteria and assigned the appropriate flag. The hierarchy of qualifiers from the most to least severe is as follows:

- R > JB/U > NJ > J+/J- > J/UJ

Data qualifiers used during this validation are included in the following table.

| <u>Qualifier</u> | <u>Definition</u> |
|------------------|-------------------------|
| J | Estimated concentration |

Data Completeness

The analysis was performed as requested on the CoC records. The associated sample was received by the laboratory and analyzed properly unless otherwise noted in the Criteria Checklist below. The complete data package consisted of 1 data point. The data point was not rejected. The data completeness measure for this data package is calculated to be 100% and is acceptable.



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 1. Was the report free of non-conformances identified by the laboratory? | Yes |
| Comments: The laboratory did not report non-conformances related to the analytical data for this sample set. | |
| 2. Were the data free of data qualification flags and/or notes used by the laboratory?
If no, define. | No |
| Comments: The laboratory used the following data qualification flag with this data set.
H – Holding times for preparation or analysis exceeded. | |
| 3. Were sample CoC forms and custody procedures complete? | Yes |
| Comments: The CoC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. Custody seals were not present because the sample was transferred to a laboratory field courier service for transport from the field to the laboratory, and custody was maintained at all times. | |
| 4. Were detection limits in accordance with the quality assurance project plan (QAPP), permit, or method, or indicated as acceptable? | Yes |
| Comments: The detection limits appeared to be acceptable. The following dilution was applied.
<u>Method 9223B</u> : Sample STP-1 to EP-2 was diluted by a factor of 10 times for the analysis of E Coli. | |
| 5. Were the reported analytical methods and constituents in compliance with the QAPP, permit, or CoC? | Yes |
| Comments: The reported analytical method was in compliance with the CoC, and the laboratory reported the requested constituent in accordance with the CoC. | |
| 6. Were samples received in good condition within method-specified requirements? | No |
| Comments: The sample was received on ice, in good condition, and with the cooler temperature outside the recommended temperature range of 4°C ± 2°C at 0.9°C as noted on the CoC and Sample Log-in Check List.
The cooler temperature below 2.0°C was judged as acceptable since the laboratory did not report the sample container as broken or frozen. | |
| 7. Were samples extracted/digested and analyzed within method-specified or technical holding times? | No |
| Comments: The sample was not analyzed within method-specific holding times.
<u>Method 9223B</u> : Sample STP-1 to EP-2 was analyzed for E. Coli outside the defined holding time of 24 hours to 48 hours by approximately 2 days. E. Coli was detected in sample STP-1 to EP-2, and this result was assigned a J qualifier based on the holding time exceedance. | |
| 8. Were reported units appropriate for the sample matrix/matrices and analytical method(s)? Specify if wet or dry units were used for soil. | Yes |
| Comments: The result was reported in concentration units of most probable number per 100 milliliters (MPN/ 100mL), which was acceptable for the sample matrix and the analysis requested. | |
| 9. Did the laboratory provide any specific initial and/or continuing calibration results? | No |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |
| 10. If initial and/or continuing calibration results were provided, were the results within acceptable limits? | N/A |
| Comments: Initial and continuing calibration data were not included as part of this data set. | |



| VALIDATION CRITERIA CHECKLIST | |
|---|-----|
| 11. Was the total number of laboratory blank samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | No |
| Comments: The total number of laboratory blank samples prepared was not equal to at least 5% of the total number of samples. | |
| 12. Were target analytes reported as not detected in the laboratory blanks? | N/A |
| Comments: Laboratory blanks were not reported for this data set. | |
| 13. Was the total number of MS samples prepared equal to at least 5% of the total number of samples or analyzed as required by the method? | No |
| Comments: The total number of matrix spike samples prepared was not equal to at least 5% of the total number of samples. Matrix spikes were not prepared for the analyses in this data set. | |
| 14. For MS/MSDs prepared from project samples, were percent recoveries and RPDs within data validation or laboratory quality control (QC) limits? | N/A |
| Comments: MS/MSD samples were not prepared using project samples as the sample source. | |
| 15. Was the total number of LCSs analyzed equal to at least 5% of the total number of samples or analyzed as required by the method? | No |
| Comments: The total number of LCS analyzed was not equal to at least 5% of the total number of samples. LCS were not reported in this data set. | |
| 16. Were LCS/LCSD percent recoveries and LCS/LCSD RPDs within data validation or laboratory QC limits? | N/A |
| Comments: LCS and LCSDs were not analyzed as part of this sample set. | |
| 17. Were surrogate recoveries within laboratory QC limits? | N/A |
| Comments: Surrogates were not required for the analysis included in this data set. | |
| 18. Were the number of trip blank, field blank, and/or equipment blank samples collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | |
| 19. Were target analytes reported as not detected in the trip blank, field blank, and/or equipment blank samples? | N/A |
| Comments: Trip, field, and equipment blank samples were not collected for this sample set. | |
| 20. Was the number of field duplicates collected equal to at least 10% of the total number of samples or as required by the project guidelines, QAPP, SAP, or permit? | No |
| Comments: Field duplicates were not collected as part of this sample set. | |
| 21. Were field duplicate RPD values within data validation QC limits (soil 0-50%, water 0-30%, or air 0-25%)? | N/A |
| Comments: Field duplicates were not collected as part of this sample set. | |
| 22. For laboratory duplicates prepared from project samples, were RPDs within data validation or laboratory QC limits? | N/A |
| Comments: Laboratory duplicate samples were not prepared for this sample set. | |



| VALIDATION CRITERIA CHECKLIST | | |
|---|--|-----|
| 23. Were the following data relationships realistic? | | |
| <ul style="list-style-type: none">Target analytes were reported by more than one method (e.g., 8260/8270, EPH/8270)? | | N/A |
| Comments: Target analytes were not reported by more than one method. | | |
| <ul style="list-style-type: none">Both total and dissolved metals analyses were performed, and the total metals results were greater than or equal to the dissolved metals results? | | N/A |
| Comments: Total and dissolved metals analyses were not performed for this data set. | | |



DATA QUALIFICATION SUMMARY

| Abbreviation | Reason |
|--------------|---|
| HT-AN | Sample was analyzed outside of the method holding time. |

| Analyte | Method | Field Sample ID | Lab Sample ID | Result | Limit | Units | Reviewer Qualifier | DV Flag Reasons |
|------------------|----------|-----------------|---------------|--------|-------|-----------|--------------------|-----------------|
| Coliform, E-Coli | EPA 9223 | STP-1 to EP-2 | 2301520-001A | >24196 | 10 | MPN/100ml | J | HT-AN |



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 209367

CONDITIONS

| | |
|---|---|
| Operator:
Western Refining Southwest LLC
539 South Main Street
Findlay, OH 45840 | OGRID:
267595 |
| | Action Number:
209367 |
| | Action Type:
[UF-DP] Discharge Permit (DISCHARGE PERMIT) |

CONDITIONS

| | | |
|------------|--|----------------|
| Created By | Condition | Condition Date |
| scwells | The Appendices to the 2022 Groundwater Monitoring Report--split up because file size too big-Accepted for Records Retention Purposes | 4/20/2023 |